**SIGNATURE PAGE**

for

SAN EMIGDIO MESA RESEARCH NATURAL AREA

LOS PADRES NATIONAL FOREST

VENTURA COUNTY, CALIFORNIA

The undersigned certify that all applicable land management planning and environmental analysis requirements have been met and that boundaries are clearly identified in accordance with FSM 4063.21, Mapping and Recordation and FSM 4063.41 5.e (3) in arriving at the recommendation

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# TITLE PAGE

Establishment Record for San Emigdio Mesa Research Natural Area within Los Padres National Forest, Ventura, California.

## A. INTRODUCTION

The San Emigdio Mesa Research Natural Area (SEMRNA) is located within the Mt. Pinos Ranger District, Los Padres National Forest (Figure 1). The area was nominated by Los Padres National Forest as a candidate RNA in 1992. Pacific Southwest Research Station accepted the area as a candidate RNA in 1992 and contracted an Ecological Survey, which was completed in 1993. Unless otherwise stated, information in this Establishment Record is taken from the Ecological Survey (Parikh 1993). The SEMRNA, as described in this Establishment Record, lies entirely within lands managed by Los Padres National Forest and within the Congressionally designated Chumash Wilderness. The Los Padres Forest and Land Management Plan makes the land allocation and management prescriptions for SEMRNA (USDA Forest Service 1992a).

1) Land Management Planning
Los Padres National Forest Land and Resource Management Plan (LRMP) recommends establishment of, and allocates 1200 acres to, the San Emigdio Mesa Research Natural Area. The SEMRNA has been governed by Management Area 66 (RNAs) and its Management Guidelines and Standards (Appendix 1) since the signing of the Forest LRMP Record of Decision in 1992 (USDA Forest Service 1992b).

## B. OBJECTIVES

The SEMRNA was selected to represent an example of the Piñon-Juniper woodland[1] target element and associated vegetation types for the Transverse Ranges physiographic province. Additional objectives in establishing the RNA include: preserve and maintain genetic diversity; protect against serious environmental disruptions; serve as reference area for the study of succession; provide onsite and extension educational activities; serve as baseline area for measuring long-term ecological changes; serve as control area for comparing results from manipulative research; and monitor effects of resource management techniques and practices.

## C. JUSTIFICATION FOR ESTABLISHMENT

The SEMRNA contains a woodland type and a geomorphic landform of mesa and alluvial fans absent from the Region 5 RNA network. Currently, no other established or candidate RNAs have been selected to represent this target element in the Pacific Southwest Region. Establishment of the San Emigdio Mesa RNA adds this important vegetation type to the Regional RNA system.

The RNA's location in the transition zone between cismontane and desert communities in southern California makes it both a valuable physical and biological RNA. Because of its location, SEMRNA contains a floral assemblage that includes many desert transitional species

[1] In this Establishment Record, vegetation type names follow Holland (1986) except as noted in the text. Tree names follow Little (1979). All other plant names follow Hickman ed. (1994). Names of fauna follow Laudenslayer et al. (1991).

outside their typical ranges. For example, the CNPS List 4 sensitive plant species, *Syntrichopappus lemmonii*, is found within the RNA, 75 miles (121 km) from its known range (Smith, 1976; 1992)..

The area supports the Mojavean Piñon Woodland vegetation type which is widely distributed in the Lockwood Valley region. An abundance of Tucker's oak (*Quercus john-tuckeri*) in portions of the Piñon-Juniper woodlands provides an unusual vegetation assemblage for research and monitoring.

## D. PRINCIPAL DISTINGUISHING FEATURES

SEMRNA is distinguished by its broad, gently sloping mesa, steep mesa edges, and alluvial fans and washes. Most of the RNA is a large alluvial fan formed by ancient stream flow from the region of Mt. Pinos. SEMRNA supports an excellent example of Piñon-Juniper woodland and has extensive stands of regenerating Single-leaf piñon pines (*Pinus monophylla*). It supports a variety of plants including many desert species outside their normal ranges. The value of this RNA is enhanced by its location in a rich archaeological area which is highly regarded by Native Americans

## E. LOCATION

1) The SEMRNA is located on Los Padres National Forest and is entirely within the Congressionally designated Chumash Wilderness.

2) The approximate center of the SEMRNA is at 34°48'N latitude and 119°15'W longitude.

3) Boundary description is as follows:

San Emigdio Mesa RNA

An area within the Chumash Wilderness of Los Padres National Forest, Ventura County, California comprising portions of Sections 12 and 13, in T.8N, R.23W, M.D.M. and Sections 7 and 8, T.8N, R.22W, MDM.

The northern boundary of SEMRNA begins at the point where Apache Canyon Road meets the boundary of the Chumash Wilderness, Forest trail 22W24, and the western boundary of Section 12, T.8N, R.23W, labeled "A" on Figure 2. The RNA boundary is adjacent to, and follows Forest trail 22W24 for approximately 0.45 miles (.28 km) to Cienega Spring (elevation 4649 feet, 1417 m). The RNA boundary continues to follow the southeast edge of Forest trail 22W24 in a northeasterly direction up a rather deep drainage to the western boundary of Section 7, T.8N, R.22W, a point marked "B" on Figure 2. From there the boundary leaves the trail and continues to follow the unnamed drainage in an easterly direction traversing the flat mesa. The boundary and drainage cross the upper one quarter of Section 7 and at approximately 0.7 miles (0.4 km) meet the

northern branch of this drainage, a point marked "C", Figure 2. From this point the RNA boundary proceeds in a southeasterly direction along the southern branch of the drainage for approximately 1 mile (.6 km) to an elevation of 5800 feet (1767 m), marked "D" on Figure 2, where it contours south for approximately 300 feet (91 m) and meets another shallow drainage near the center of Section 8, T.8N., R.22W. The boundary follows this unnamed drainage in a southwesterly direction across Section 8 and Section 7. At a point approximately 300 feet (91 m) northeast of the southern boundary of Section 7, the drainage widens and descends from the mesa across the northwest quarter of Section 18, T.8N, R.22W. until it reaches the bottom of Apache Canyon, and Forest trail 8N06A in the center-east portion of Section 13, T.8N., R.22W., a point marked "E" on Figure 2. From that point the boundary continues in a northwesterly direction following the main Apache Creek drainage to where it reaches the western section line of Section 12, T.8N., R.22W., a point marked "F" on Figure 2. The boundary then turns due north and follows the section line for approximately 1200 feet (366 m) where it the meets the beginning point "A" at Forest trail 22W24.

4) The San Emigdio Mesa RNA comprises 1200 acres (486 ha).

5) Elevations range from 4500 feet (1372 m) to 5800 feet (1767 m).

6) Access (Figure 1)

San Emigdio Mesa is accessible from the west (off State Highway 33) via Apache Canyon Road. Apache Canyon Road (Forest Road 8N06) is classified as an unimproved dirt road and is passable most of the year. A 4WD vehicle is not generally necessary. The road is graded and repaired in late spring or early summer. From Santa Barbara, driving time to the western boundary of the RNA is about 2.5 hours, and a distance of approximately 83 miles (133km). From the Supervisor's Office of Los Padres National Forest in Goleta, driving time is 2.75 hours and total distance is about 92 miles (147 km).

To reach San Emigdio Mesa RNA, drive south on U.S. Highway 101 from the Supervisor's Office about 22 miles (35km) to State Highway 150. Follow State Highway 150 east about 15 miles (24 km) to State Highway 33. Follow Highway 33 north for about 45 miles (72 km) to the Apache Canyon Road turnoff to the right (east). Follow this road about 8.5 miles (14 km) to the turnoff to Nettle Spring Campground. Various private landowners, mainly ranchers, own parcels along Apache Canyon Road and have agreements with the Forest Service that allow public access to Nettle Spring Campground. Two unlocked gates are located along this access route. Since SEMRNA is part of the Chumash Wilderness, the last 1 mile (1.6 k) to the RNA's western edge must be traversed by foot. Most of this last section is privately owned, and is protected by a locked gate. Apache Canyon Road forks at the RNA's western edge; two dirt roads, Forest Road 8N06A and Forest Trail 22W24 proceed south and north, respectively. The southern fork is washed out after about 0.75 miles (1.2 k) and the northern fork terminates temporarily after about 0.5 mile (0.8 km) at Cienega Spring, but then continues, unmaintained, along the northern boundary of the RNA for about 1 mile (1.6 km). No trails exist in the RNA.

## F. AREA BY COVER TYPES

Table 1. Acreage of cover types existing in San Emigdio Mesa RNA

| COVER TYPE | CODE | ACRES | HECTARES |
|---|---|---|---|
| SAF (Eyre 1980) TYPE<br>Piñon-Juniper | 239 | 1200 | 486 |
| KÜCHLER (1966) TYPE<br>Juniper-Piñon | K-23 | 1200 | 486 |
| HOLLAND (1986) TYPE<br>Mojavean Piñon Woodland | 72210 | 1200 | 486 |

## G. PHYSICAL AND CLIMATIC CONDITIONS

San Emigdio Mesa is in the mountains of central and northern Ventura County, part of the Transverse Ranges of Southern California. It is in the Northern Transverse Ranges subsection of the Southern California Mountains and Valleys Ecological Section (USDA 1993b). The mesa is bordered by the Mt. Pinos region to the east; and the Cuyama Valley to the west.

No permanent weather stations are present in SEMRNA. Table 2 shows average monthly precipitation for the years 1959 to 1966 at San Emigdio Mesa Ranch located 15.5 air miles (25 km) NNE of the RNA. Table 2 also includes average monthly precipitation for the years 1948 to 1993 from Maricopa station, located 20 air miles (32 km) NNE of the RNA (NOAA 1997). Elevations of San Emigdio Ranch and Maricopa stations are 1450 feet and 680 feet (442 m and 207 m) respectively. Because they are lower than the RNA, it is likely that data shown in Table 2 reflect lower precipitation than actually occurs in the RNA. Mean annual precipitation is 8.03 inches (20.42 cm) at the San Emigdio Ranch and 5.72 inches (14.55 cm) at Maricopa Weather Station. Monthly averages for high and low temperatures were supplied by the Maricopa weather station (Table 3). Mean annual maximum and minimum temperatures are 77.46 and 52.80 degrees Fahrenheit (25.26 and 11.55 degrees Celsius).

Table 2. Average monthly precipitation from San Emigdio Ranch, 1959 to 1966, and Maricopa Weather Station, 1948 to 1993.

| Month | Precipitation Normal, inches (centimeters) | |
|---|---|---|
| | San Emigdio Ranch | Maricopa Weather Station |
| Jan | 0.78 (1.99) | 0.97 (2.46) |
| Feb | 1.89 (4.80) | 1.07 (2.73) |
| Mar | 0.84 (2.14) | 1.05 (2.68) |
| Apr | 1.10 (2.81) | 0.61 (1.56) |
| May | 0.35 (0.90) | 0.22 (0.56) |
| Jun | 0.02 (0.06) | 0.03 (0.08) |
| Jul | 0.00 (0.00) | 0.00 (0.00) |
| Aug | 0.28 (0.71) | 0.05 (0.13) |
| Sep | 0.22 (0.56) | 0.26 (0.66) |
| Oct | 0.55 (1.40) | 0.24 (0.62) |
| Nov | 0.88 (2.23) | 0.72 (1.83) |
| Dec | 0.64 (1.62) | 0.69 (1.76) |
| Annual | 8.025 (20.420) | 5.717 (14.547) |

Table 3. Monthly average, maximum and minimum temperatures from Maricopa Weather Station, Kern County, 1948 to 1993.

| Month | Mean Temperature in degrees Fahrenheit (Celsius) | |
|---|---|---|
| | Maximum | Minimum |
| Jan | 56.23 (13.46) | 36.92 (2.73) |
| Feb | 63.06 (17.26) | 41.99 (5.55) |
| Mar | 67.93 (19.97) | 45.31 (7.39) |
| Apr | 75.59 (24.22) | 50.14 (10.08) |
| May | 84.14 (28.97) | 56.59 (13.66) |
| Jun | 92.45 (33.58) | 63.94 (17.75) |
| Jul | 98.32 (36.84) | 69.89 (21.05) |
| Aug | 96.16 (35.64) | 68.38 (20.21) |
| Sep | 90.49 (32.49) | 63.74 (17.64) |
| Oct | 80.56 (26.98) | 55.48 (13.05) |
| Nov | 66.49 (19.16) | 44.47 (6.93) |
| Dec | 56.75 (13.75) | 37.27 (2.93) |
| Annual | 77.46 (25.26) | 52.80 (11.55) |

## H. DESCRIPTION OF VALUES

### 1) FLORA

Flora of SEMRNA includes at least 106 taxa of vascular plant species (Appendix 2). Voucher specimens collected in spring of 1992 were deposited at the Santa Barbara Botanic Garden herbarium. The flora of SEMRNA is derived mainly from the Conifer Woodland Element of Madro-Tertiary Geoflora (Munz and Keck 1974). Species composition includes many desert transitional species that co-occur with cismontane, coastal California, and interior taxa. In general, overstory species richness is limited but, species richness of annuals is high. Cover of perennial species is relatively high in the understory, especially at lower elevations.

No Federally or State listed threatened, rare, endangered, or candidate plant or animal species are known to occur in SEMRNA. A CNPS List 4 sensitive plant species, *Syntrichopappus lemmonii*, was found in the RNA. California jewelflower (*Caulanthus californicus*) has been reported from nearby canyons (Magney 1988), but has not been found in the RNA. This species is on the CNPS list 1B, and is State and Federally-listed as Endangered (Skinner and Pavlik eds. 1994).

The vegetation map (Figure 3) is based on Holland's (1986) classification. The entire area is mapped as Mojavean Piñon Woodland although subtle differences occur throughout the RNA.

**Mojavean Piñon Woodland (72210):** Woodlands of the RNA form extensive open stands of low trees and shrubs. The trees appear to be relatively even-aged. Several fire-created patches are evident. The dominant tree species in the RNA is single-leaf piñon pine (*Pinus monophylla*) which range in height from about 6 to 65 feet (1.8 to 20 m). California juniper (*Juniperous californica*) is the dominant understory shrub species. Junipers are less abundant above 4500 feet (1372 m) in elevation where they grow in open washes and on western and southern exposures. At higher elevations, in cooler, shadier washes, or on northerly exposures, Tucker's oak is the dominant or co-dominant shrub. Tucker's oak is an unusual plant series in the Mojavean Piñon Woodland vegetation type. Another variation of the dominant vegetation type is at lower elevations, on flat alluvial washes and terraces at the base of San Emigdio Mesa. Here understory shrub species are abundant, such as Great Basin sagebrush (*Artemisia tridentata*), rabbitbrush (*Chrysothamnus nauseosus* ssp. *hololeucus*), and stontopsis (*Ericameria linearifolius*). Dominant herbaceous species throughout the RNA are lupine (*Lupinus excubitus* var. *austromontanus* or *L. formosus*), Buckwheats (*Eriogonum fasciculatum* ssp. *polifolium*, *E. wrightii* ssp. *subscaposum*), scarlet bugler (*Penstemon centranthifolius*), and many annual species (Appendix 2). At the top of the mesa, where the woodland has sparser canopy cover, low cushion plants such as buckwheat (*Eriogonum kennedyi*) and locoweed (*Astragalus purshii* var. *tinctus*) cover gently sloping, open flats, in gravelly or rocky soil.

2) FAUNA

No federal or state listed threatened, endangered, sensitive of candidate species occur in the RNA. However, the region is historical breeding habitat for the Federally listed Endangered California condor (*Gymnogyps californianus*). The adjacent wetland meadow at Cienega Spring is part of a Cooperative Wildlife Project to study and protect the wetland area. Cooperators include: USDA Forest Service, California Department of Fish and Game, and the Apache Canyon Allotment Permittee. Appendix 3 contains a list of wildlife species which may occur within the RNA. This list was derived from the Wildlife Habitat Relationship model database (Timossi 1989) and updated by the Los Padres National Forest.

3) GEOLOGY

This region is bounded to the north by a primary branch of the San Andreas Fault, to the south by the Big Pine Fault, and to the west by the Ozena Fault (Norris and Webb, 1976). The Mt. Pinos region is composed of granitic, intrusive igneous and metamorphic rocks primarily of the Mesozoic Era (Jurassic Period) or older. The San Emigdio Mesa region is composed mainly of Cenozoic Era, non-marine (terrestrial/continental) sedimentary rocks and alluvial deposits. The top of the mesa is made up of Quaternary Period (Pleistocene Epoch) surficial sediments; course fan gravel (cobble-boulder gravel) of granite and metamorphic rocks derived from the Mt. Pinos region is embedded in a sandstone matrix (mapping symbol, Qog). These surficial sediments are probably underlain by red clay in the western part of the mesa. The western boundary of the RNA is composed of folded rocks from the lower part of the Morales Formation (terrestrial/nonmarine, late Pliocene Epoch), which is composed of alluvial gravels, sand, and some clay (Tmol). A small southern section of the RNA is composed of light red beds of clays, sandstone and conglomerates of the Quatal Formation (Tq; terrestrial/nonmarine, Hemphillian stage, Pliocene Epoch). Geologic units were field mapped by Dibblee (1971).

4) SOILS

The soils of the RNA were mapped by USDA Forest Service in a third order survey (O'Hare and Hallock 1987). The area is composed of three soil map units: Morical-Supan-Green Bluff Families Association, Los Tobles-Trigo Families Orthents Association, and Orthents-Fluvents Complex (map units 35, 24, and 39 respectively, Appendix 4). The largest map unit, Morical-Supan-Green Bluff Families Association, is located on the mesa on 0 to 60 percent slopes. Morical and Supan Family Soils tend to be very deep and well drained. Surface texture for the Morical Family is loam, which quickly gives way to a sandy clay loam subsoil (2 to 28 inches, 5 to 71 cm). The Supan Family surface layers are gravelly loam in texture which changes to a gravelly clay loam subsoil (from 7 to 32 inches, 18 to 81 cm). The Green Bluff Family soils are moderately deep and well drained with sandy loam texture throughout the profile. The Los Robles-Trigo families-Orthents Association occurs on 30 to 60 percent slopes along the mesa's edge. The Los Robles Family soils are moderately deep and well drained with sandy loam textures in the surface layer giving way to a loam subsoil (4 to 21 inches, 10 to 53 cm). The Trigo Family soils are shallow and excessively drained with a gravelly sandy loam texture throughout the

profile. Orthents in this map unit are well drained, very shallow and have a sandy loam texture down to weathered sandstone and conglomerate at 12 inches (31 cm). The lowest flats in the RNA are mapped as Orthents-Fluvents Complex, 0 to 15 percent slopes. The Orthents in this map unit are very deep, well drained with a coarse sandy loam surface layer and sandy loam subsoil (5 to 60 inches, 13 to 33 cm). Fluvents are also very deep, and well drained, but have a sandy loam texture throughout the soil profile.

5) LANDS

All lands within the SEMRNA are on National Forest Land, there are no in-holdings or private lands adjacent to the RNA. The RNA is entirely within the Congressionally designated Chumash Wilderness. The RNA is also within Los Padres Condor Range established in 1992 by the passage of PL 102-301 (USDA 1993a).

6) CULTURAL SITES

The SEMRNA has high potential for cultural resources, although, a transect survey located along the RNA's northern periphery found no historic properties. This work was undertaken quite some time ago and does not conform to modern standards. As yet, no detailed studies or surveys have been conducted within the RNA (Horne 1997).

San Emigdio Mesa RNA lies within the territory ascribed to the Cuyama Chumash. Known prehistory in the area extends over 3000 years with much greater antiquity probable, but not confirmed. Mt. Pinos, located approximately 6 miles east of the RNA, is considered by the Chumash tribe as the center of the universe. An extremely important rock painting site is located approximately one half mile north of the RNA.

Topography, vegetation and prehistory of SEMRNA indicate a high level of sensitivity for heritage resources. The mesa serves as an access route to the high places of Cerro Noroeste and Mt. Pinos. Such an access and presence of the rock art together suggest that the RNA probably will be regarded as a traditional use site by the modern Chumash. Establishment of the RNA will help to preserve the archeological values of this area as well as provide protection for modern Chumash uses.

## I. IMPACTS/CONFLICTS

1) MINERAL RESOURCES

The SEMRNA is entirely within the Chumash Wilderness and is withdrawn from mineral entry. There are no known active or pending oil and gas leases, or leases for any other substances such as phosphates in the RNA (Vrendenburgh 1993). An Oil and Gas Lease Application, which included portions of Sections 12 and 13 on the topographical maps, was withdrawn on January of 1992, and not renewed.

2) GRAZING

The entire SEMRNA lies within the Apache Canyon Grazing Allotment which supports cattle on a year-round basis. The total grazing allotment size is 22,300 acres (9024 ha) and is composed of two units. The Morrow unit, which is outside of the RNA, is 300 acres (121 ha) and supports 56 yearlings from January 1 to March 15. The Apache unit (22,000 acres, 8903 ha) is grazed by 60 cow/calf pairs, March 16 through October 31, or 607 animal unit months (AUMs). Typically, the livestock are herded to the west end of the allotment. Cross-fencing prevents cattle access to the RNA until approximately June or July, depending on the availability of feed in the west end. Animal numbers are reduced to 15 cow/calf pairs from November 1 to December 31 (41 AUM), after which cattle are removed from the larger Apache unit and confined to the Morrow unit (Foster 1997).

Evidence of grazing impacts were observed in the western section of the RNA, but appeared to be absent atop the mesa. Grazing activity, based on the frequency of cow pies, is high in the Cienega Spring meadow area and at the base of the shallow washes nearby. Cow pies were observed in the washes up to about 4950 feet (1509 m) but were absent above that elevation. The Los Padres LRMP (Appendix 1) states that grazing opportunities will not be expanded in RNAs and may be eliminated as identified in the RNA management plan. Current grazing levels do not appear to interfere with RNA values, but review of current grazing impacts in cooperation with permittees is recommended for development of the RNA management strategy.

3) TIMBER

The SEMRNA is entirely within the Chumash Wilderness and is withdrawn from the forest timber base. Commercially important timber species do not occur in the SEMRNA.

4) WATERSHED VALUES

San Emigdio Mesa drains west into Apache Canyon, then to the Cuyama River, and finally into the Santa Maria River. This region is included in the South Coast Drainage Basin of California (U.S. Department of Commerce, 1964). Twitchell Reservoir, which serves as a water supply for the city of Santa Maria, is located on the Cuyama River. Establishment of the SEMRNA will protect and enhance water quality of this drainage system.

5) RECREATION

In general, recreation conflicts with RNA designation are minimal. Nettle Spring Campground is located approximately 1.5 miles (2.4 km) west of the RNA and is the only public campground in the vicinity. Use of this campground is light. No Forest trails traverse the RNA, however some hunting and target practice may occur in areas adjacent to the RNA boundary. The RNA lacks points of interest to general campers, so off-trail use is minimal. The Los Padres Forest LRMP (1992) states that Recreational use should not be encouraged in RNAs.

6) WILDLIFE AND PLANT VALUES

Establishment of the RNA protects and preserves for scientific research and monitoring an

example of the Mojavean Piñon Woodland. Establishment of the RNA will continue to protect habitat of *Syntrichopappus lemmonii* and California Condor.

7) SPECIAL MANAGEMENT AREAS

The SEMRNA lies entirely within the Congressionally designated Chumash Wilderness. The Forest LRMP states that when within a Wilderness, Wilderness management takes priority. It is the experience of the Region 5 RNA Committee, that there is little conflict between RNA and Wilderness of management prescriptions. Inclusion of SEMRNA in Los Padres Condor Range is consistent with RNA standards and guides.

8) TRANSPORTATION PLANS

There are no plans to expand the Forest transportation system into SEMRNA or into the Wilderness. Establishment of SEMRNA has no effect on Forest transportation plans.

## J. MANAGEMENT PRESCRIPTION

Appendix 1 contains management direction for SEMRNA as stated in the Los Padres National Forest Land And Resource Management Plan (USDA 1992a). Management Emphasis calls for non-destructive, non-manipulative research and study. Review of grazing impacts on RNA values will be conducted in the development of the RNA Management Strategy and in coordination with range permittees.

1) Management Strategy

The Los Padres National forest will prepare a Management Strategy for SEMRNA in consultation with Pacific Southwest Research Station. The plan will specify project prescriptions, practices, uses, and monitoring compatible with objectives for establishment of the RNA.

## K. ADMINISTRATION RECORDS AND PROTECTION

Responsibility for administration and protection of SEMRNA belongs to the District Ranger, Mount Pinos Ranger District, HC 1, Box 400, Frazier Park, CA 93225.

Because the SEMRNA is within a Congressionally designated Wilderness Area, authority to approve the RNA Management Strategy and to oversee and coordinate approved research projects rests with the Region 5 Regional Forester, 630 Sansome Street, San Francisco, California 94111 (Forest Service Manual 4063.04b, 2323.04c). In exercising this authority, the Regional Forester shall coordinate with the Director of the Pacific Southwest Forest and Range Experiment Station, 800 Buchanan Street, Albany, CA 94710. The Director is responsible for maintaining research data files.

## L. ARCHIVES

The Station Director shall establish and maintain a system for archiving data and reports from Research Natural Areas in a manner that facilitates the exchange and transfer of information among Stations, Forests and scientists.

## M. REFERENCES


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**San Emigdio Mesa Research Natural Area**

APPENDICES

Appendix 1: Management Direction

Appendix 2 Plant list of San Emigdio Mesa RNA

Appendix 3 Wildlife Habitat Relationship Model, list of species

Appendix 4 Soil maps and descriptions

# APPENDIX 1

## Management Direction for San Emigdio Mesa Research Natural Area

Taken from:

USDA Forest Service. 1992a. Final Environmental Impact Statement Land and Resource Management Plan, Los Padres National Forest.

USDA Forest Service 1992b. Record of Decision, Final Environmental Impact Statement Land and Resource Management Plan, Los Padres National Forest.

USDA Forest Service. 1993a. Amendments #1 and #2 to the Forest Land and Resource Management Plan, Los Padres National Forest.

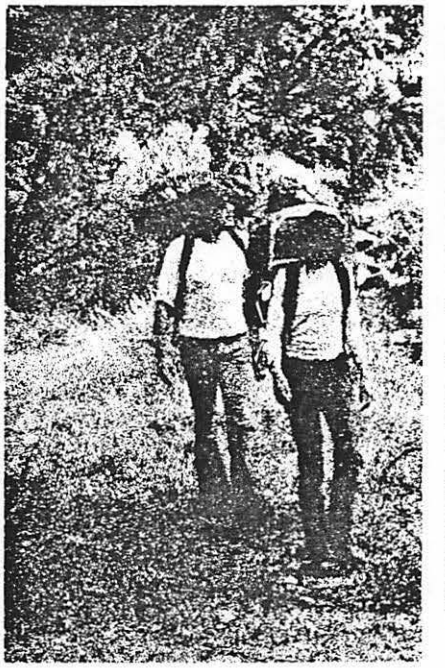
United States
Department of
Agriculture

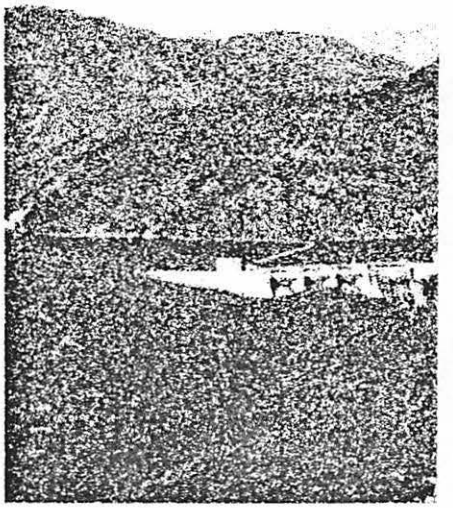
Forest Service
Pacific Southwest
Region

Los Padres
National
Forest

# Land and Resource Management Pl

# Los Padres National Forest





253,886 acres for Wilderness (portion of Garcia [107], portion of La Brea [117], portion of Matilija [129], and a portion of Sespe-Frazier [002] Roadless Areas). Addition of these Roadless Areas to Los Padres Wilderness Areas will create 666,798 net acres of Wilderness and will further expand capability to meet demand for recreational and non-recreational uses. Thirty-eight percent of the Forest will be designated Wilderness.

Wilderness areas will be managed according to management prescriptions designed to preserve their Wilderness character. Prescribed burning will assist in the maintenance and enhancement of the Wilderness character and will reduce dangerous fuel loading. Better access and more evenly distributed use will be achieved through construction of an estimated 232 miles of trail.

### 4.2.11 Special Areas

The Plan provides for the management of existing and proposed Special Areas. Table 4.2-2 lists the areas.

Table 4.2-2
**Special Areas**

| Category and Name | Size | Location and Significance |
|---|---|---|
| **Research Natural Areas** | | |
| Cone Peak Gradient (Established 1987) | 2955 acres | West slope of Cone Peak, Monterey District. Unique ecological diversity, mixed evergreen forest with diverse plant communities associated with steep elevational gradient. |
| American Canyon | 1500 acres | On south slope of Pine Mountain in La Panza Range, Santa Lucia District. Coulter pine and chaparral. |
| Wagon Caves | 150 acres | Along San Antonio River at south base of Junipero Serra Peak, Monterey District. Oak-annual grass savanna. |
| Black Butte | 540 acres | On north slope of Cuesta Ridge near Mount Lowe, Santa Lucia District. Scattered groves of knobcone pine and associated chaparral. |
| San Emigdio Mesa | 1200 acres | Southwest slope of Cerro Noroeste, Mount Pinos District. Pinyon-juniper and associated brush species. |
| Ventana Cones | 1400 acres | Vicinity of Ventana Double Cone and and Ventana Cone, Monterey District. Santa Lucia fir/canyon live oak forest with mixed evergreen forest in association. |
| Southern California | undet | Location to be selected from either of two candidate areas with mixed conifer forest and chaparral: (1) San Rafael Mountain (1300 acres) (2) Big Pine Mountain (1000 acres) |
| **Botanical Special Interest Areas** (All acreages approximate) | | |
| Cuesta Ridge (Established 1969) | 1330 acres | San Luis Obispo Co., Santa Lucia District; Sargent cypress, Coulter pine and 12% of Forest's sensitive plants. |
| Southern Redwood | 10 acres | Along Soda Creek south of Silver Peak, Monterey District. Southernmost natural stand of coast redwood. |

Table 4.2-2 continued
**Special Areas**

| Category and Name | Size | Location and Significance |
|---|---|---|
| Alder Creek | 75 acres | Upper Alder Creek, Monterey District; Sargent cypress with rare endemics. |
| Lion Den Spring | 85 acres | North of Silver Peak, Monterey District; Sargent Cypress grove with endemics. |
| Dry Lakes Ridge | 450 acres | At Dry Lakes Ridge between Sespe and Matilija Creeks, Ojai District. Disjunct relict plant species within small enclosed basin. |
| Mount Pinos Summit | 510 acres | Atop Mount Pinos, Mount Pinos District. Limber pine stands constituting the Forest's sole examples of southern California subalpine forest. |
| **Geological Special Interest Area** | | |
| Quatal Canyon | 2536 acres | Quatal Canyon west of Mount Abel, Mount Pinos District. Unique eroded badland topography with Miocene vertebrate fossils. |
| **Other Special Areas** | | |
| California Coast Ranges Biosphere Reserve (Established 1983) | 3858 acres | Incorporates Cone Peak Gradient RNA, U.C. Reserve, and portion of Ventana Wilderness, Monterey District. Includes a variety of forest, woodland, shrub and coastal plant communities. |
| Sierra Madre Cultural Resource Area | 5772 acres | Incorporates and expands upon the Eastern Sierra Madre Ridge Archeological District, Mount Pinos District. |
| **Wild And Scenic Rivers** | | |
| Big Sur River main stem and North and South forks | 14.4 miles | From lower portions of North and South Forks to Forest boundary within Ventana Wilderness Area, Monterey District. Popular Wilderness-centered recreation and outstanding redwood forest. |
| Sisquoc River | 31 miles | From headwaters to Forest boundary, within San Rafael Wilderness Area, Santa Lucia District. High scenic diversity, Wilderness-centered recreation, outstanding wildlife habitat and cultural values. |
| Sespe Creek | 28.5 miles | From Trout Creek to Devil's Gate, Ojai District. Excellent scenic diversity, important recreation resource, outstanding geological, wildlife, and cultural features. |

Designation of Biosphere Reserve will not preclude other Forest Service management. Management of Wild and Scenic Rivers will follow approved management plans designed to protect and improve distinguishing values. Research Natural Areas will be managed to preserve their distinctive natural ecosystems for scientific and educational purposes. Forest Service management of National Natural Landmarks will not be affected by such designation; however, the nominated Landmark will be protected through its joint status as a Research Natural Area and Wilderness. Management activities in the Geological and

follows the introduction. Prescription information is arranged in the form of a two column table organized by resource elements. For each resource element, the left hand column includes the name of the resource element and numbers (or number) which correspond to the applicable management practice definitions in Appendix A and describes general guidelines which direct implementation of the management practices for each resource element. The right hand column lists any applicable specific standards. These standards establish the minimum requirements for implementing the Management Area direction for each resource element. The specific standards are in addition to the Forest-wide standards and guidelines (refer to Section 4.3), which apply equally to all Management Areas.

Table 4.4-1 displays the total acreage governed by each Management Area prescription. Table 4.4-2 shows average annual outputs by decade and costs associated with the application of these prescriptions.

Table 4.4-1
Acreage of Management Areas*

| Management Area/ Prescription | Area | Management Area/ Prescription | Area |
|---|---|---|---|
| 1 | 20515 | 37 | 23814 |
| 3 | 48677 | 38 | 41881 |
| 4 | 57659 | 39 | 14323 |
| 5 | 36563 | 42 | 6440 |
| 6 | 197039 | 48 | 49042 |
| 7 | 28453 | 51 | 1181 |
| 10 | 18344 | 52 | 10647 |
| 11 | 44458 | 54 | 5397 |
| 12 | 78589 | 57 | 10754 |
| 13 | 35011 | 61 | 43622 |
| 14 | 10591 | 63 | 19959 |
| 16 | 15607 | 64 | 666798 |
| 25 | 25927 | 65 | 54781 |
| 26 | 7677 | 66 | 7745 |
| 27 | 320 | 67 | 2460 |
| 28 | 156569 | 68 | 2536 |
| 29 | 58777 | 69 | 5772 |
| 32 | 9680 | 70 | 20648 |
| 33 | 7981 | | |

*Certain Management Areas are covered by two prescriptions, e.g. some Research Natural Areas are covered by the RNA prescription (RX 66) and the Wilderness prescription (RX 64).

## Management Area 66

**Area Description:**

Management Area 66 consists of six separate land units comprising 7,745 total acres. Two canditate areas totaling 2300 acres are also identified. These units are situated as follows:

66a, "Cone Peak RNA," three miles east of Lopez Point between Cone Peak and Lime kiln Creek (Monterey RD) within the Highway 1 scenic corridor; (2955 acres)

66b, "Wagon Caves RNA," nine miles northeast of Lopez Point on lower Rattlesnake Creek (Monterey RD); (150 ac.)

66c, "Black Butte RNA," three miles northeast of San Luis Obispo in the vicinity of Mt. Lowe (Santa Lucia RD); (540 ac)

66d, "American Canyon RNA," nine miles east of Santa Margarita Lake at Pine Mountain (Santa Lucia RD); (1500 acres)

66e "San Emigdio Mesa RNA," fifteen miles west of Frazier Park near Mount Abel (Mount Pinos RD); (1200 acres)

66f, "Ventana Cone RNO," seven miles northwest of Big Sur (Monterey RD). (1400 acres)

66g, "Candidate San Rafael Mountain RNA," twelve miles northeast of Lake Cachuma (Santa Lucia RD); (1300 acres)

66h, "Candidate Big Pine Mountain," twelve miles north of Gibralter Reservoir (Santa Barbara RD); (1000 acres)

American Canyon RNA is within critical habitat of the California Condor.

**Management Emphasis: Protection and management of candidate and proposed Research Natural Areas**

The area is managed for non-destructive, non-manipulative research and study. Cultural resources management emphasizes complete inventory and evaluation of properties with a high priority placed on enhancement through research and study. Other uses are secondary to scientific use. RNA's may be located within designated Wilderness. Landscapes will essentially possess the visual characteristics of a natural condition.

| Management Guidelines | Management Standards |
|---|---|
| **General/mgmt. practices.** | |
| Evaluate suitability of Candidate Research Natural Areas | |
| Prepare an Establishment Report and Management Plan by 1990. | |
| **Cultural Resources/ 1, 2, 4** | |
| Management of cultural resources emphasizes complete inventory and evaluation with a high priority placed on enhancement through research and study. | |

**Recreation/ 33, 44, 46**
Recreational use should not be encouraged. Where it is not practical to eliminate recreational use, only primitive or semi-primitive non-motorized use will be permitted.

New recreational improvements are not permitted.

Trails to and through RNA's are permitted if they promote or do not detract from scientific use.

Trails are maintained at level 1 or 2.

**Visual Resources/ 5a**
Maintain a natural landscape.

| Summary Visual Quality Objectives | |
|---|---|
| Class | % Acres |
| Preservation | 100 |
| Minimum VQI = | 69 |

**Wilderness Management/ 9**
Where an RNA is located within an established Wilderness, Wilderness implementation direction applies.

**Fish and Wildlife/ 10, 11**
Wildlife improvements may be permitted if needed for sensitive or Threatened and Endangered species, or if they would not significantly alter the botanical community for which the RNA was established.

Any projects which may destroy or modify critical condor habitat shall undergo consultation with U.S. Fish and Wildlife Service prior to approval.

**Range Resource/ 14, 15**
Grazing opportunities will not be expanded and may be eliminated as identified in the RNA management plan.

**Timber/ 19**
Neither timber harvest nor reforestation are permitted.

**Special Uses/ 25**
No special use permits will be granted unless they aid in scientific study.

**Withdrawals/ 26**
RNA's will be recommended for withdrawal from mineral entry.

A "no surface occupancy" stipulation will be included in any recommendation for mineral leases.

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**Transportation/**
Roads will not be constructed in RNA's.

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**Fire/ 34, 35, 36, 37, 38**
Suppression methods will be selected to minimize impacting RNA values.

Prescribed burning is permitted only to perpetuate ecosystems.

**rare species**
One that, although not presently threatened with extinction, is in such small numbers throughout its range that it may be endangered if its environment worsens. A classification used by the State of California with a similar definition as a Federally listed threatened species.

**real dollar value**
A monetary value which compensates for inflation.

**receipt shares**
A percentage of revenue collected by National Forests which is given to State and county governments where the forest is located for use on country roads and schools.

**recommended Research Natural Area**
An area for which all evaluation and study have been completed and the area is ready to be recommended to the Chief of the Forest Service for designation.

**recovery species**
Federally listed threatened or endangered wildlife and fish species for which an objective has been set to raise the population to a viable level.

**recreational river area**
As used in the Wild and Scenic Rivers Act, those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

**recreation composite**
A plan which identifies geographical areas containing significant and needed outdoor recreation resources, features, or opportunities within or adjacent to National Forest boundaries and which justifies land purchases using Land and Water Conservation Fund monies.

**Recreation Information Management (RIM)**
The Forest Service system for recording recreation facility condition and use.

**Recreation Opportunity Spectrum (ROS)**
A means of classifying and managing recreation opportunities based on physical setting, social setting, and managerial setting. The six different ROS classes are described in Appendix A of the FEIS, practice 46.

**Recreation Visitor Day (RVD)**
Twelve (12) hours of recreation use in any combination of persons and hours, i.e., one person for 12 hours, 3 persons for 4 hours, etc.

**reforestation**
Reestablishing a crop of trees on forest land by natural or artificial methods.

**regeneration**
Reestablishing a crop of trees on forest land by natural or artificial methods.

**rehabilitation, visual**
Activity applied to restore landscapes to a level at least in conformance with the adopted Visual Quality Objectives.

**release**
Freeing a tree or group of trees from immediate competition by eliminating growth that is overtopping or closely surrounding them.

**Research Natural Area (RNA)**
An area established specifically to preserve a representative sample of an ecological community; primarily for scientific and educational purposes.

**retention (R)**
See Visual Quality Objectives.

**revegetate**
To reestablish vegetation (grass, brush, trees) on the soil surface of disturbed areas to prevent soil erosion and increase land productivity.

**right-of-way**
An accurately located land area within which a user may conduct operations approved or granted by the landowner. May also refer to a permit, easement, lease, license, or Memorandum of Understanding (MOU) used to authorize the land use.

**right-of-way acquisition**
Acquiring rights-of-way for Forest Service use of lands owned by others.

**right-of-way grant**
Rights-of-way granted to others to use National Forest land in the manner specified.

**riparian area**
Land situated along the bank of a stream or other body of water and directly influenced by the presence of water, e.g., streamsides, lake shores, etc.

**Roadless Area Review and Evaluation (RARE) II**
The assessment of "primitive" areas within the National Forests as potential Wilderness areas as required by the National Wilderness Act. This refers to the second such assessment which was documented in the final environmental impact statement of the Roadless Area Review and Evaluation, January 1979.

**road maintenance levels**
1-*Closed to all traffic.* Maintenance is performed to retain investment value and prevent off-road resource damage. This type of road may be opened and used for the duration of a project, but is then returned to a non-use condition.

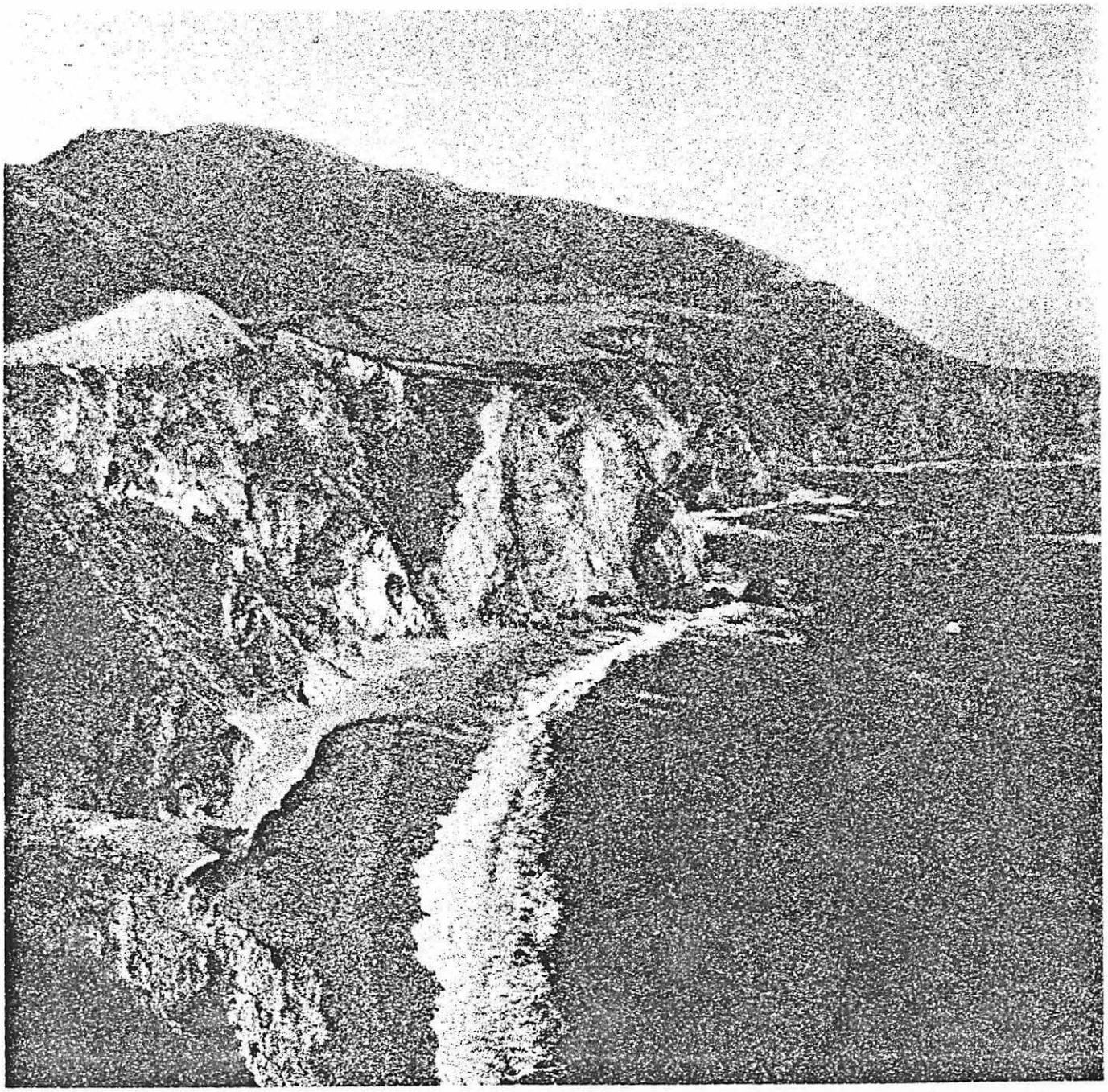
United States Department of Agriculture

Forest Service
Pacific Southwest Region

Los Padres National Forest

# Final Environmental Impact Statement Land and Resource Management Plan

# Los Padres National Forest



ness values and to provide for activities authorized in the Wilderness Act of 1964 and other enabling Acts.

**Prescription 65.** Condor habitat is the emphasized resource. The area is managed to provide maximum habitat protection for perpetuation and enhancement of the California Condor. This may include prescribed burning to improve condor habitat.

**Prescription 66.** Potential Research Natural Areas are the emphasized resource. The areas are managed for non-destructive, non-manipulative research and study. Special use permits will not be issued unless they authorize activities which aid in scientific study. The areas will be recommended for withdrawal from entry under the General Mining Laws. Mineral leasing will be allowed if the minerals can be extracted without occupying the surface of the Research Natural Area. New recreation improvements, timber harvesting, reforestation and new road construction will not be allowed.

**Prescription 67.** Botanic resources are emphasized. The area is managed for the protection of unique botanic resources for public and scientific use. Special use permits will not be allowed unless the proposed use is clearly compatible with the emphasized resource. Botanic Area management plans will analyze the need to withdraw the area from entry under the General Mining Laws. Mineral leasing will be allowed if the minerals can be extracted without occupying the surface of the Botanic Area. New roads and motorized trails will not be constructed.

**Prescription 68.** Geologic resources are emphasized. The area is managed to preserve the present character of the landscape for scenic and educational purposes. The area will be recommended for withdrawal from entry under the General Mining Laws. Mineral leasing will be allowed if the minerals can be extracted without occupying the surface of the Geologic Area. No new roads or motorized trails will be constructed.

**Prescription 69.** Cultural resources are emphasized. The area is managed to protect and enhance significant cultural values. Management of cultural resources emphasizes protection and research related to rock art sites and a complete inventory of cultural properties. Appropriate research and study is encouraged. Off-road vehicle use, developed site recreation improvements and road or motorized trail construction activities will not be authorized. Protection of condor habitat is also a priority.

**Prescription 70.** Potential Wild and Scenic Rivers are the emphasized resource. Area management emphasizes protection of the values which make the river area outstandingly remarkable while providing river-related recreation opportunities in a primitive setting

Table 2.4-2 continued

**Acreage Allocations By Prescriptions (RX) And Alternatives**

| RX Geographic Area | I | II | III | IV | V | VI | VII | VIII |
|---|---|---|---|---|---|---|---|---|
| 62 High Recreation: Moderate Areas (non-timbered) Managed at Lower Levels | | 19959 | | | 19959 | | 19959 | |
| 63 High Recreation: Moderate Areas (non-timbered) Managed at Upper Levels | 19959 | | 13239 | 1995959 | | 19959 | | 19959 |
| 64 Wilderness | 666798 | 412912 | 1103882 | 902221 | 756904 | 695640 | 56774 | 412912 |
| 65 Condor Sanctuary | 54781 | 54781 | 54781 | 54781 | 54781 | 54781 | 54781 | 54781 |
| 66 Research Natural Areas (RNA) | 7745 | 2955 | 7745 | 6395 | 7745 | 7745 | 7745 | 6395 |
| 67 Botanical Areas | 2460 | 1350 | 1420 | 1420 | 1400 | 1670 | 1350 | 1350 |
| 68 Geological Areas | 2536 | | | | | 2536 | | |
| 69 National Register District | 5772 | | 5772 | | 5772 | 5772 | | |
| 70 Wild and Scenic Rivers | 23648 | 12288 | 26048 | 20608 | 26048 | 26048 | 20608 | |
| **Subtotal** | 1849228 | 1780888 | 1848508 | 1846188 | 1848508 | 1848508 | 1846188 | 1770799 |
| Less Acreage Covered by More than One Management Prescription | 84824 | 16484 | 84104 | 81784 | 84104 | 84104 | 81784 | 6395 |
| **Adjusted Total** | 1764404 | 1764404 | 1764404 | 1764404 | 1764404 | 1764404 | 1764404 | 1764404 |

Table 2.4-4
**Allocation of Special Areas**

| Area | I | II | III | IV | V | VI | VII | VIII |
|---|---|---|---|---|---|---|---|---|
| **Wild and Scenic Rivers** | | | | | | | | |
| Big Sur 1 | W | W | W | W | W | W | W | |
| Big Sur 2 | W | | | | | | | |
| Sisquoc 1 | W | W | W | W | W | W | W | |
| Sisquoc 2 | | | | | | | | |
| Sespe 1 | | | | | | | | |
| Sespe 2 | L | | S | | S | S | | |
| Sespe 3 | W | | W | W | W | W | W | |
| Piru | | | | | | | | |
| **RNA's** | | | | | | | | |
| American Canyon | X | | X | X | X | X | X | X |
| San Emigdio Mesa | X | | X | | X | X | X | |
| Wagon Caves | X | | X | | X | X | X | |
| Cone Peak (existing) | X | X | X | X | X | X | X | X |
| Black Butte | X | | X | X | X | X | X | X |
| Ventana Cones | X | | X | X | X | X | X | X |
| San Rafael Wilderness | P | | P | P | P | P | P | P |
| Big Pine Mtn. | P | | P | P | P | P | P | P |
| **Special Interest Areas** | | | | | | | | |
| **Botanical Areas** | | | | | | | | |
| Alder Creek | X | X | X | X | X | X | X | X |
| Lion Den Spring | X | X | X | X | X | X | X | X |
| Mt. Pinos Summit | X | | X | X | | X | | |
| Southern Redwood | X | | X | X | X | X | | |
| Dry Lakes Ridge | X | | | | | X | | |
| Cuesta (existing) | X | X | X | X | X | X | X | X |
| **Geologic Area** | | | | | | | | |
| Quatal Canyon | X | | | | | X | | |
| **Other Special Areas** | | | | | | | | |
| Sierra Madre Cultural Resource Area | X | | X | | X | X | | |
| Cone Peak-Limekiln Creek | X | X | X | X | X | X | X | X |
| Quatal Canyon | X | X | X | X | X | X | X | X |
| **Biosphere Reserve** | X | X | X | X | X | X | X | X |

KEY
W = Recommended Wild River
S = Recommended Scenic River
X = Recommended
P = RNA study area (no recommendation)
L = Portion Recommended
(Blanks) = Not recommended

*Table 2.7-1 continued*

**Resolution of Issues, Concerns and Opportunities**

| Issue Components | How Resolved | Alternatives | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | I | II | III | IV | V | VI | VII | VIII |
| 10-6 Determine the capability and suitability of the Forest to support off-road vehicle uses; identify where such use should occur. | S&G RX MONIT | ROS classes were defined for each management area (Issue 10-1). These classes determine the suitability and appropriateness of ORV activities on each area of the Forest. Each alternative directs that there will be periodic review and updating of the Forest ORV Plan. Monitoring will provcide data to assist in this updating (S&G Recreation #1,6). | | | | | | | |
| 10-7 Identify opportunities for the use of energy-efficient public transportation in Forest recreation programs; establish coordination procedures with local government units where applicable. | S&G RX | Direction is given in applicable management area prescriptions to promote the use of public transportation for access to and from the Forest, E.G. RX 42, Recreation. A Forest policy directing the cooperation of the Forest with all appropriate federal, state, and county agencies is common to all Alternatives (S&G General #4). | | | | | | | |
| 10-8 Determine need to provide for separation of conflicting uses including firearms and ORVs. | S&G | Separation of conflicting uses is provided through the establishment of the ROS designations for each management area (Issue 10-1). In addition, direction is given to separate conflicting recreational uses in a way consistent with management area direction (S&G Recreation #3). | | | | | | | |
| 10-9 Determine appropriate types and levels or use regulation on the Forest. | S&G | The establishment of ROS classes (Issue 10-1) determines the appropriateness of varying types and levels of use (S&G Recreation #1). | | | | | | | |
| **SPECIAL AREAS** *Issue #11: What unique areas in Los Padres National Forest should be designated as Special Areas?* | | | | | | | | | |
| 11-1 Locate and evaluate areas or sites on the Forest which potentially meet the criteria for Special Areas to be set aside as representative areas of Biological, Physical or Paleontological interest. | RX | The Alternatives recommend varying allocations of potential special management areas for special designations. The number allocated in each Alternative is closely related to the overall theme of the Alternative. In the following listing by Alternative, the symbols used are: Research Natural Area (RNA); Botanical Area (BA); Geologic Area (GA); Cultural Resource District (CRD). (Shown in number of areas allocated.) | | | | | | | |
| RNA | | 6 | 1 | 6 | 4 | 6 | 6 | 6 | 4 |
| BAs | | 6 | 3 | 5 | 5 | 4 | 6 | 3 | 3 |
| GAs | | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| CRDs | | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 11-2 Identify areas or sites on the Forest which, because of their unique resources, should receive special designations such as Wild and Scenic Rivers, National Natural Landmarks. | RX | The Alternatives recommend varying allocations of the Wild and Scenic River inventory. Allocations are for two classifications: Wild and Scenic (measured in miles of river in category). One area has been recommended as a National Natural Landmarks | | | | | | | |
| Wild | | 73.9 | 38.4 | 64.4 | 64.4 | 64.4 | 64.4 | 64.4 | 0 |
| Scenic | | 0 | 0 | 17.0 | 0 | 17.0 | 17.0 | 0 | 0 |

needed in all Wilderness areas within the Forest to reduce resource damage both within and outside Wilderness.

## 3.12 Special Areas

### 3.12.1 Introduction

Special areas include the following categories:

- Wild and Scenic Rivers.
- Recommended and Candidate Research Natural Areas (RNAs).
- Candidate Botanical Special Interest Areas.
- Candidate Geologic Special Interest Areas.
- Sierra Madre Cultural Resource Areas.
- National Natural Landmarks.
- Coastal Zones.
- Biosphere Reserves.

The following discussion briefly outlines the significance of and opportunities related to these areas.

### 3.12.2 Wild and Scenic Rivers

Four rivers within the Forest were studied to determine their suitability for wild or scenic river status. The three possible classifications in the study were Wild, Scenic, and Recreational. To be eligible for any of these classifications rivers must meet criteria described in the Wild and Scenic River Act (PL 90-542) . Under the Act, river corridors are evaluated on the basis of naturalness and human activity. The most natural rivers are classified as Wild, those somewhat less natural as Scenic, and those that have undergone some development as Recreational.

An eligible river must be free flowing and possess one or more "outstandingly remarkable" resource values (e.g., special geological, ecological, recreational,cultural, or scenic features). The study rivers and segments within Los Padres National Forest are described in detail in Appendix E. These rivers are most significant when considered in the context of their location in Southern California. They are not necessarily comparable to other rivers in the State. Eligible rivers are divided into segments; the width of a segment extends one quarter mile inland from each bank. The Big Sur and Sisquoc Rivers, and Sespe and Piru Creeks were studied.

The Big Sur River study area is 14.4 miles in length. One segment runs from the confluence of the North and South Forks of the Big Sur downstream to the Forest boundary adjacent to Pfeiffer-Big Sur State Park. It is adjacent to the eastern boundary of Pfeiffer-Big Sur State Park and accessible from the heavily used Big Sur coast and Highway 1. The other segment is composed of the two main upper tributaries of the river. Both segments are entirely on National Forest lands within the Ventana Wilderness and accessed by trail.

The Sisquoc River study area is also divided into two segments. Segment 1 is about 31 miles long and is on National Forest lands within the San Rafael Wilderness. Segment 2 is about 2 miles long and extends from the San Rafael Wilderness boundary downstream to the National Forest boundary; a majority of this segment is in private ownership. The river is accessible by foot and equestrian trail only; there is no public access across the private lands.

Fifty-one miles of Sespe Creek were studied. About 42 miles are National Forest lands, and 9 miles are in private ownership. Approximately 15 miles of the creek are accessible by vehicle from Highway 33. The remaining sections have trail access only. Segment 1 extends 8 miles, from the source downstream to the confluence with Chorro Grande Canyon; segment 2 runs 17 miles from Chorro Grande Canyon to the confluence with Bear Canyon; and segment 3 extends 26 miles from Bear Canyon to Devil's Gate.

Fourteen miles of Piru Creek, beginning at Frenchman's Flat and ending downstream at Lake Piru, were studied. The upper 12 miles are within the National Forest while about 2 miles of the lower portion are in private ownership. A road paralleling the lower 2.5 miles of the creek provides access to Blue Point Campground and private ranches. The remainder contains 4 miles of trails. The rivers are further described in Appendix E.

Any recommendation for a wild and scenic river designation is a preliminary administrative recommendation. Such recommendations will receive further review and possible modification by the Chief of the Forest Service, Secretary of Agriculture, and the President of the United States. Final decisions have been reserved by the Congress to designate rivers to the National Wild and Scenic Rivers System.

### 3.12.3 Recommended and Candidate Research Natural Areas

These areas are part of a nationwide network set aside as examples of typical and distinctive natural ecosystems and reserved for scientific and educational use. RNAs preserve genetic diversity, provide habitat for threatened and endangered species, and are used to compare the effect of human activities on similar ecosystems. The recommended and candidate RNAs identified in Table 3.12-1 represent significant Forest botanical types. Additional information describing each area is found in Appendix I.

Table 3.12-1
**Recommended Research Natural Areas**

| Name | Botanical Element | Size and Location | Importance |
|---|---|---|---|
| Black Butte | knobcome pine forest | 540 acres situated on the steep generally northwest facing slopes of Cuesta Ridge in the Santa Lucia Wilderness. | Area contains scattered and continuous stands of knobcone pine inter-mixed with chaparral |
| Wagon Caves | valley oak grassland | 150 acres at the boundary of the Forest and Hunter-Liggett Military Reservation | Area contains exceptionally good stand of valley oak grassland, a type which has disappeared or is little protected elsewhere. |
| San Emigdio Mesa | pinyon woodland | Covers 1200 acres of a large flat alluvial fan on the Mt.Pinos Ranger District. | Fan is dominated by single-leaf pinyon and dwarf oak. |
| American Canyon | Coulter pine woodland | 1500 acre area in Machesna Wilderness, Santa Lucia Ranger District. | Coulter pine occurs in abundance as generally well dispersed even-aged stands growing in chamise chaparral. |
| Ventana Cones | Santa Lucia fir | 1400 acre area in the rugged Ventana Wilderness on the Monterey Ranger District. | Area contains some of the best stands of the rare Santa Lucia fir growing on steep rocky outcrops and slopes. |

**Note: The Cone Peak Gradient RNA which was listed as a recommended RNA in the DEIS has been formally designated as an RNA.**

| | | | |
|---|---|---|---|
| San Rafael Mountain | mixed conifer forest | 1300 acre area in San Rafael Wilderness on the Santa Lucia Ranger District. | Area contains mixed conifer forest with good stands of bigcone douglas fir and Coulter pine. Montane chaparral covers a large portion of the area. |
| Big Pine Mountain | mixed conifer forest | 1000 acre area in the San Rafael Wilderness. | Similar to San Rafael Mountain area except it also contains extensive stands of canyon live oak woodland. |

### 3.12.4 Candidate Botanical Special Interest Areas

Botanical Areas do not meet all requirements for RNA designation, but do contain significant plants or plant communities. In addition, these areas also may have important recreation values. The Cuesta Ridge Botanical Area was classified in 1969. The five additional areas considered are listed in Table 3.12-2 and further described in Appendix I.

### 3.12.5 Candidate Geologic Special Interest Area

Geologic Areas have outstanding or unique geologic features. The Quatal Canyon Geologic Area consists of 2540 acres in the Cuyama Badlands. This area has unique, eroded terrain and vertebrate remains of the Miocene Epoch (12 to 16 million years ago). A more detailed description of this area may be found in Appendix I.

Although the Forest has other unique geologic features including the Sierra Blanco limestone and the Sespe red-bed formations, a Forest-wide inventory of unique geologic features has not been completed. Local organizations, State universities, and colleges do, however, conduct on-going inventory programs within the Forest.

### 3.12.6 Sierra Madre Cultural Resource Area

The Sierra Madre Special Interest Area includes about 5,700 acres within the Sierra Madre Mountains of the Mt. Pinos Ranger District. The majority of the area is within the Eastern Sierra Madre Ridge National Register District (Section 3.13.1); also included are adjacent areas of known cultural value. Management emphasizes protection and research related to rock art sites and other cultural properties.

### 3.12.7 National Natural Landmarks

The National Natural Landmark (NNL) Program is administered by the National Park Service under the Historic Sites Act of 1935. The program is intended to preserve and enhance outstanding examples of ecological or geological character, and encourages scientific, educational, and cultural use.

Two areas within the Forest, Cone Peak-Limekiln Creek and Quatal Canyon Geologic Area, have been proposed for designation as NNLs. The Secretary of the Department of the Interior approves such areas for listing on the National Registry of Natural Landmarks. The listing of National Natural Landmark

Table 4.12-1
**Allocation Of Special Areas**

| Alternative<br>**Area** | I | II | III | IV | V | VI | VII | VIII |
|---|---|---|---|---|---|---|---|---|
| **Wild and Scenic Rivers** | | | | | | | | |
| Big Sur 1 | W | W | W | W | W | W | W | |
| Big Sur 2 | W | | | | | | | |
| Sisquoc 1 | W | W | W | W | W | W | W | |
| Sisquoc 2 | L | | | | | | | |
| Sespe 1 | | | | | | | | |
| Sespe 2 | | | S | | S | S | | |
| Sespe 3 | W | | W | W | W | W | W | |
| Piru | | | | | | | | |
| **RNAs** | | | | | | | | |
| American Canyon | X | | X | X | X | X | X | X |
| San Emigdio Mesa | X | | X | | X | X | X | |
| Wagon Caves | X | | X | | X | X | X | |
| Cone Peak Gradient( Existing) | X | X | X | X | X | X | X | X |
| Black Butte /1 | X | | X | X | X | X | X | X |
| Ventana Cones | X | | X | X | X | X | X | X |
| San Rafael Mtn. | P | | P | P | P | P | P | P |
| Big Pine Mtn. | P | | P | P | P | P | P | P |
| **Special Interest Areas** | | | | | | | | |
| **Botanical Areas** | | | | | | | | |
| Alder Creek | X | X | X | X | X | X | X | X |
| Lion Den Spring | X | X | X | X | X | X | X | X |
| Mt. Pinos Summit | X | | X | X | | X | | |
| Southern Redwood | X | | X | X | X | X | | |
| Dry Lakes Ridge | X | | | | | X | | |
| Cuesta (Existing) | X | X | X | X | X | X | X | X |
| **Geologic Area** | | | | | | | | |
| Quatal Canyon | X | | | | | X | | |
| **Other Special Areas** | | | | | | | | |
| Sierra Madre Cultural Resource Area | X | | X | | X | X | | |
| **National Natural Landmarks** | | | | | | | | |
| Cone Peak-Limekiln Creek | X | X | X | X | X | X | X | X |
| Quatal Canyon | X | X | X | X | X | X | X | X |
| Biosphere Reserve | X | X | X | X | X | X | X | X |

KEY:
W = Recommended Wild River
S = Recommended Scenic River
X = Recommended
P = RNA study area (no recommendation)
[Blanks] = Not Recommended
L = Portion recommended

/1 was called Water Canyon in the DEIS.

## 4.12 Special Areas

### 4.12.1 Introduction

Recommendations for special emphasis areas are based on compatability with the theme of each alternative. The following types of special areas were identified and considered under each alternative.

- Wild and Scenic Rivers
- Research Natural Areas (RNAs)
- Botanical Special Interest Areas
- Geological Special Interest Areas
- National Natural Landmarks
- Cultural Resources Areas
- Coastal Zone.

Four assumptions important to this discussion are that:

- the existing Biosphere Reserve within the Forest is not discussed with the exception of the portion that overlaps with the Cone Peak Gradient RNA.
- no recommendation for the mixed conifer forest RNAs will be made until additional studies are completed.
- the Cone Peak-Limekiln Creek and Quatal Canyon National Natural Landmarks are designated in every alternative and since they have no impact on the area's management activities are not discussed.
- Management of the Forest within the coastal zone will be consistent to the maximum extent practicable with the State's management program for the coastal zone.

The major factor affecting the coastal zone is the withdrawal of the area from mineral exploration and development. For the remaining special areas only management activities consistent with the qualities for which the area was designated are permitted. As a consequence, the activity with the greatest impact is designation itself.

#### 4.12.1.1 Mineral Withdrawal

Withdrawal of the coastal zone from mineral activities would protect the area's unique scenic and coastal values. Varying degrees of withdrawals were considered : no withdrawal; withdrawal of the lands between the ocean and Highway 1 from all mineral entry; withdrawal of the entire coastal zone from mineral leasing.

#### 4.12.1.2 Designation

Wild and Scenic rivers are managed to protect and, if possible, improve the values for which the river was designated; other uses must be consistent with this purpose. If a river is not designated, these values could be degraded.

RNAs are dedicated to research and education, and exclude other management activities. Designation as an RNA is more constrained than Wilderness management . Management activities are permitted in Botanical and Geologic Special Interest Areas as long as they do not adversely impact the special values of the area. Recreation is generally a compatible use. Designation of a Biosphere Reserve does not usually affect an area's management.

Management activities are permitted in Cultural Resources Areas as long as they are compatible with cultural resource values. Activities which substantially increase use or create adverse surface impacts are not appropriate.

Designation of an area as a National Natural Landmark recognizes its uniqueness but has no effect on the management activities which may occur.

### 4.12.2 Consequences

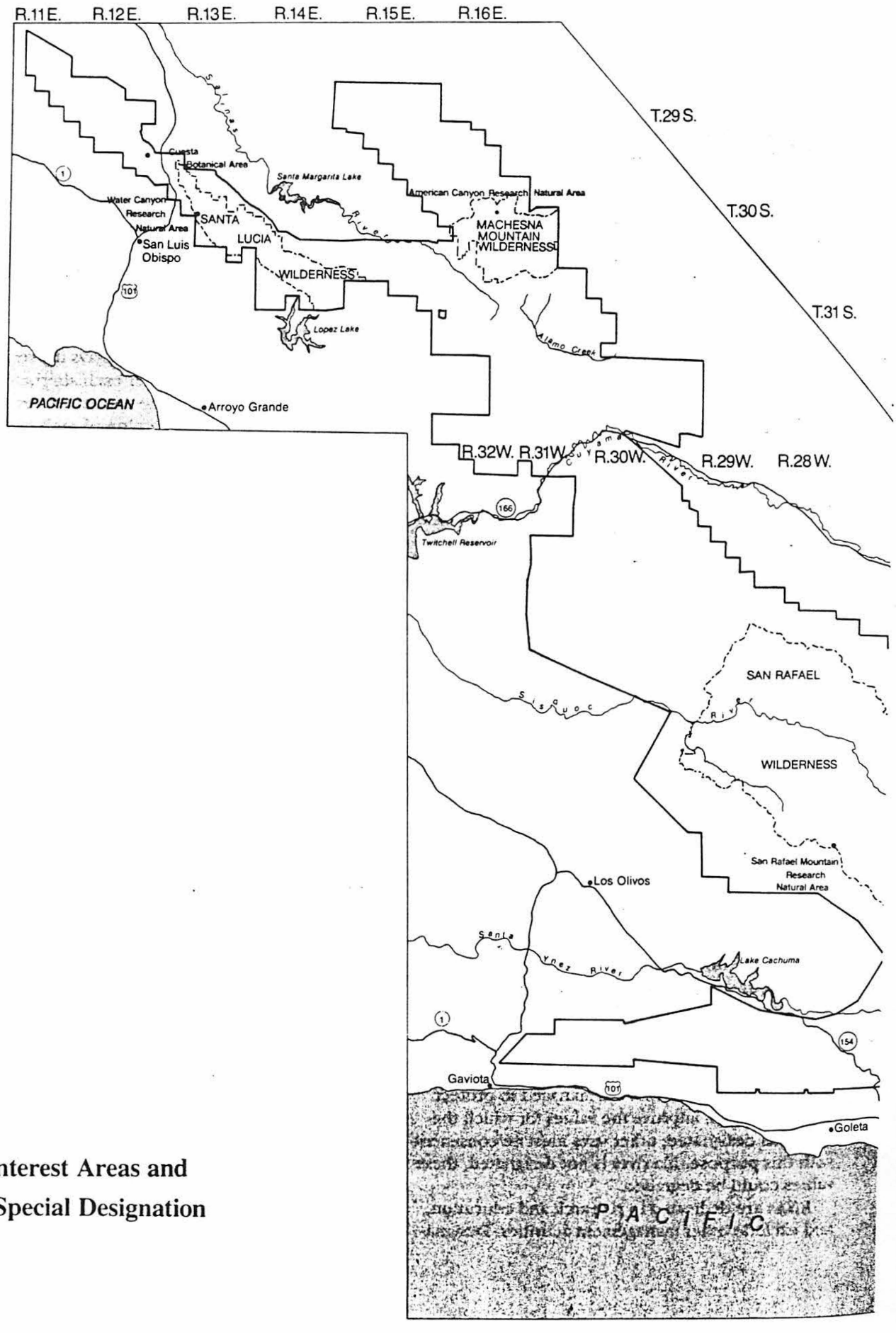
Table 4.12-1 graphically displays the recommendations for special areas under each alternative and helps in understanding the consequences of designating special areas. A description of each of these areas is found in Section 3.12.

#### 4.12.2.1 Alternative I

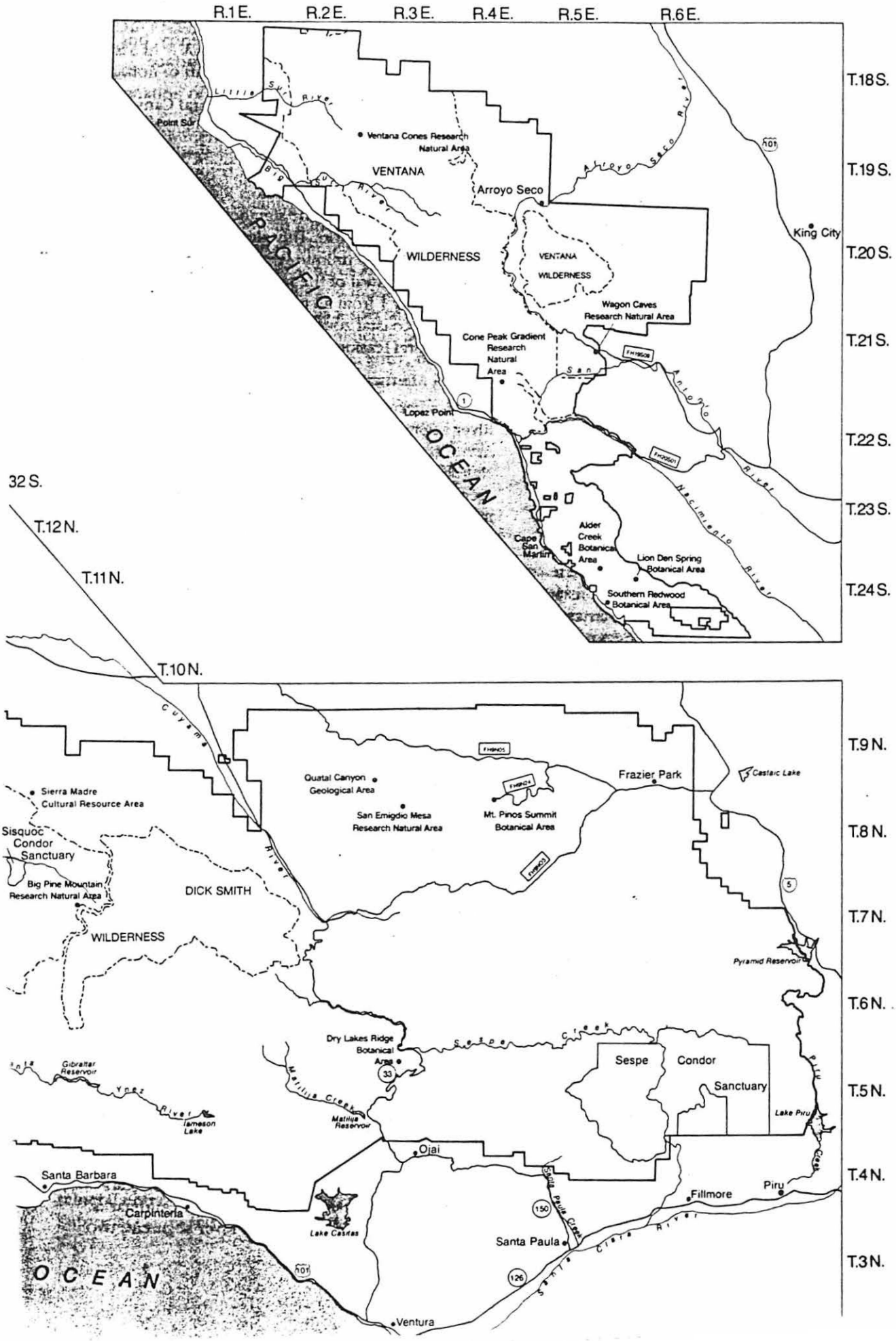
This alternative designates five RNAs, three Wild River segments, five botanical special interest areas, a geologic special interest area, a cultural resources special area and two National Natural Landmarks. It also proposes two candidate RNAs. The three Wild River segments, the two candidate RNAs, and three of the recommended RNAs are in Wilderness. The effect of adding a dual designation to these areas would be minimal.

Designation of Wagon Caves and San Emigdio Mesa RNAs would result in the loss of 175 AUM's/year. The mineral potential of these areas is low to medium. Management activities can continue in the five botanical special interest areas so long as they do not degrade botanical values. Botanical and geologic special interest areas are low in mineral potential and contain no known resources of commercial value. The Sierra Madre cultural resources area has low potential for locatable minerals and moderate potential for oil and gas. Designation as a special area would prohibit surface access for minerals activities by withdrawing the area from mineral entry, but would allow directional access to subsurface minerals such as oil and gas.

This alternative emphasizes the coastal zone's unique scenic resources by proposing the withdrawal of the land between the ocean and Highway 1 from all mineral activity. Other lands within the coastal zone are proposed for withdrawal from mineral leasing.




**Special Interest Areas and Areas of Special Designation**


R.1E.
R.2E.
R.3E.
R.4E.
R.5E.
R.6E.
T.18S.
T.19S.
T.20S.
T.21S.
T.22S.
T.23S.
T.24S.
32 S.
T.12N.
T.11N.
T.10N.
T.9N.
T.8N.
T.7N.
T.6N.
T.5N.
T.4N.
T.3N.
Point Sur
Little Sur River
Ventana Cones Research Natural Area
VENTANA
WILDERNESS
Big Sur River
Arroyo Seco
Arroyo Seco River
101
King City
PACIFIC
OCEAN
VENTANA WILDERNESS
Wagon Caves Research Natural Area
Cone Peak Gradient Research Natural Area
FH19508
San Antonio River
Lopez Point
1
Nacimiento River
Cape San Martin
Alder Creek Botanical Area
Lion Den Spring Botanical Area
Southern Redwood Botanical Area
Cuyama River
Sierra Madre Cultural Resource Area
Sisquoc Condor Sanctuary
Big Pine Mountain Research Natural Area
DICK SMITH
WILDERNESS
FH19405
Quatal Canyon Geological Area
San Emigdio Mesa Research Natural Area
FH19404
Mt. Pinos Summit Botanical Area
FH19403
Frazier Park
Castaic Lake
5
Pyramid Reservoir
Dry Lakes Ridge Botanical Area
33
Sespe Creek
Sespe
Condor
Sanctuary
Piru Creek
Lake Piru
Gibraltar Reservoir
Santa Ynez River
Lemeson Lake
Matilija Creek
Matilija Reservoir
Ojai
Santa Barbara
Carpinteria
Lake Casitas
Santa Paula Creek
150
Fillmore
Piru
Santa Clara River
Santa Paula
126
OCEAN
101
Ventura

## I1.0 Recommended Research Natural Areas

### I1.1 Cone Peak Gradient (Established 7/87)

#### I1.1.1 Affected Environment

This area is located in portions of Sections 33, 34, and 35, T. 21 S., R. 4E.; and Sections 2, 3, 10, 11, 14, and 15, T. 22 S., R. 4 E., MDM in Monterey County.

This 2955 acre area is remarkable for its ecologic diversity. Within a three mile horizontal distance inland from the Monterey coast, the mountains rise from sea level to 5000 feet. The resulting elevational and climatic gradient has associated with it 12 plant communities including canyon live oak *(Quercus chrysolepis)* woodland, mixed evergreen forest, coast live oak *(Quercus agrifolia)* woodland, coast redwood *(Sequoia sempervirens)* and chaparral.

Other features are:

- the area is within the Ventana Wilderness
- commercially important timber species occur in the area
- a minor amount of grazing occurs in the area
- several trails traverse the area.

### I1.2 American Canyon

#### I1.2.1 Affected Environment

This area is located in Sections 9 and 10, portions of Sections 14, 15, 16, and 23, T. 30 S., R. 16 E., MDM in San Luis Obispo County.

The area encompasses approximately 1500 acres of a basin that drains into American Canyon. Coulter pine *(Pinus coulteri)* occurs in abundance as dispersed, generally even-aged stands of varying size and density. Fires swept through the southeast and northwest portions of the basin in 1921 and 1939, respectively. Most stands date back to those fires; however, ridgetop and canyon bottom stands spared from the fires contain older trees. The associated chaparral is dominated by chamise *(Adenostema fasciculatum)* and Eastwood manzanita *(Arctostaphylos glandulosa).*

Other features of this area are:

- no mineral claims or oil and gas leases are known for the area
- no grazing occurs within the area but does occur seasonally in small nearby oak grasslands
- no commercially important timber species occur in the area
- trail 16E01, which runs along the east-west ridge of the basin is an approved Off-Road Vehicle (ORV) trail; 16E02 is closed to ORVs
- some hunting likely occurs in the area
- the area is within the Machesna Wilderness.

#### I1.2.2 Consequences

Designation: The consequences of designation are negligible because the area is in Wilderness. The Wilderness designation does not permit silvicultural activities or surface occupancy for oil and gas activities. Grazing would not be permitted for transitory range. Trail construction would not be permitted in Alternatives III, VI, and VII which have a recreation emphasis.

Non-designation: The values and resources of the area would be little-affected by non-designation since, as explained above, Wilderness constrains management activities.

### I1.3 Wagon Caves

#### I1.3.1 Affected Environment

The proposed Research Natural Area is located adjacent to road 19509 at the entrance to the Forest from Hunter-Liggett-Military Reservation in T. 21, R.5E, MDM in Monterey County.

Although only 150 acres in size, this valley oak (Quercus lobata) grassland is an exceptionally good stand of a type which has mostly been converted to agricultural land throughout California. No other National Forest, public or private reserve, has an example of this oak savanna type in comparable size or condition (J. R. Griffin, pers. comm.).

Other features are:

- No mineral claims or oil and gas leases are known for the area
- the area is part of the Upper Milpitas allotment and is extensively grazed
- the area is used with increasing frequency by wood gatherers and hunters.
- potential for leasable and locatable minerals is very low.

#### I1.3.2 Consequences

Designation: Designation would result in the loss of 100 AUMs/year and an insignificant amount of cordwood. Mineral withdrawal would have no effects

since potential for leasable and locatable minerals is very low.

Non-designation: Non-designation could result in the gradual degradation of this stand by continued recreational and grazing use. This could result in the loss of a good example of a type that is disappearing or little-protected off Forest.

### I1.4 Black Butte

#### I1.4.1 Affected Environment

This candidate covers portions of Sections 6, 7, 8, 9, 17 and 16, T. 30 S., R. 13 E., MDM in San Luis Obispo County.

This 540 acre area is situated on the steep, generally northwest facing slopes on the Cuesta Ridge within the Santa Lucia Wilderness. Knobcone pine-chaparral is the primary vegetation type. The principal tree species is knobcone pine *(Pinus attenuata)* and is found on north and northeast slopes as scattered groves and occasional continuous areas. Chaparral species, principally chamise *(Adenostema fasciculatum)*, manzanita *(Arctostaphylos obispoensis)*, and the sensitive Santa Lucia manzanita *(A. luciana)* occupy the area between pine stands.

The intermittent streams that drain into Black Butte support riparian vegetation composed of coast live oak *(Quercus agrifolia)*, California bay *(Umbellaria californica)*, tanoak *(Lithocarpus densiflora)*, madrone *(Arbutus menziesii)*, and bigleaf maple *(Acer macrophyllum)*.

Other features are:

- no mineral claims or oil and gas leases are known for the area
- no grazing occurs within the area
- no commercially important timber species occur within the area
- no trails cross the area

#### I1.4.2 Consequences

Designation: The consequences of designation are negligible because the area is in Wilderness. The Wilderness designation does not permit silvicultural activities or surface occupancy for oil and gas activities. Grazing would not be permitted for transitory range. Trail construction would not be permitted in Alternatives III, VI, and VII which have a recreation emphasis.

Non-designation: The values and resources of the area would be little-affected by non-designation since, as explained above, Wilderness constrains management activities.

### I1.5 San Emigdio Mesa

#### I1.5.1 Affected Environment

This area is located in portions of Sections 7, 8, 12, and 13, T. 8 N., R. 22 W., SBM in Ventura County.

The area covers approximately 1200 acres of an expansive flat alluvial fan dissected by several intermittent stream channels and gullies. The main vegetation type is pinyon-juniper. Pinyon pine *(Pinus monophylla)*, the dominant tree species, averages 15 to 20 feet in height and is evenly distributed over the entire area in low to moderate densities. Of the three common brush species, California juniper *(Juniperus californica)*, big sagebrush *(Artemisia tridentata)*, and dwarf oak *(Quercus turbinella ssp. californica)*, dwarf oak is by far the most abundant. Common understory subshrubs are *Eriogonum kennedyi* and *Lupinus excubitus (or formusus)*.

Understory herbaceous plants are generally sparse and widely scattered. Some are: *Linanthus aureus, Descurainia pinnata, Eriophyllum pringlei, Lotus humistratus, Arenaria douglasii, Phacelia distans, Arabis pulchra, Mimulus spp., and Gilia spp.*

Other features of the area are:

- application for oil and gas leasing has been made. The general area is known to contain palladium in low concentrations. Oil and gas potential is moderate.
- the proposed Research Natural Area is within the Apache grazing allotment which is grazed between June 1 and October 31
- commercially important timber species do not occur in the area
- some hunting may occur in the area; there are no hiking or off road vehicle trails.

#### I1.5.2 Consequences

Designation: Designation would result in the loss of 75 AUMs/year. The area has medium to low potential for leaseable and locatable minerals so mineral withdrawalwould have little effect. Designation would not allow surface occupancy for oil and gas development.

Non-designation: Non-designation would have little effect on the are since grazing and recreational use are not expected to change from the existing condition. Oil and gas development is unlikely to occur.

### I1.6 Ventana Cones

#### I1.6.1 Affected Environment

This area is located in portions of sections 6,7, and 8 of T.19 S., R.3 E. and portions of Sections 1 and 12, T.19 S., R.2 E., MDM Monterey County.

Some of the best Santa Lucia fir *(Abies bracteata)*/ canyon live oak *(Quercus chrysolepis)* forests are contained in this rugged 1400 acre area of the Ven-

tana Wilderness. Typically, these forests occupy the steepest slopes, seldom burned by fire because of their rocky character. Other types intermixed with this forest type include: chaparral, composed of a variety of species *(Quercus wizlizenii, Ceanothus integerrimus, Adenostoma fasciculatum and others)*, and mixed evergreen forests.

Other features are:

- no mineral claims or oil and gas leases occur in the area
- no grazing occurs within the area
- no commercially important timber species occur within the area
- no trails cross the area.

### I1.6.2 Consequences

Designation: The consequences of designation are negligible because the area is in Wilderness. The Wilderness designation does not permit silvicultural activities or surface occupancy for oil and gas activities. Grazing would not be permitted for transitory range. Trail construction would not be permitted in Alternatives III, VI, and VII which have a recreation emphasis.

Non-designation: The values and resources of the area would be little-affected by non-designation since, as explained above, Wilderness constrains management activities.

## I2.0 Candidate Research Natural Areas

### I2.1 San Rafael Mountain

### I2.1.1 Affected Environment

This area is located in Sections 1,2, and 3 of T.7 N., R.28 W. and a portion of Section 6, T.7 N., R.27 W., SBM Santa Barbara County.

The target botanical type of this 1300 acre area is southern California mixed conifer forest. Ponderosa pine *(Pinus ponderosa)*, sugar pine *(Pinus lambertiana)*, Jeffrey pine *(Pinus jeffreyi)*, white fir *(Abies concolor)*, and incense cedar *(Calocedrus decurrens)* are the principle species of this type. In addition, there are good stands of bigcone Douglas-fir *(Psuedotsuga menzesii)*/ canyon live oak *(Quercus chrysolepis)* along the steep slopes of the South Fork of the Sisquoc River. Montane chaparral, composed of a variety of brush species *(Arctostaphylos glandulosa, Ceanothus papillosus, Ceanothus leucodermis, and Quercus spp.)* is also well represented, covering nearly one-half the area.

Other features are:

- no grazing occurs in the area
- commercial timber species are present but unavailable because they are in Wilderness
- no oil and gas leases occur in the area.

### I2.1.2 Consequences

Designation: The consequences of designation are negligible because the area is in Wilderness. The Wilderness designation does not permit silvicultural activities or surface occupancy for oil and gas activities. Grazing would not be permitted for transitory range. Trail construction would not be permitted in Alternatives III, VI, and VII which have a recreation emphasis.

Non-designation: The values and resources of the area would be little-affected by non-designation since, as explained above, Wilderness constrains management activities.

### I2.2 Big Pine Mountain

### I2.2.1 Affected Environment

This area includes portions of Sections 31 and 32, T.8 N., R.26 W.; and, Sections 1,2 and 12 of T.7 N., R27 W. and Sections 6 and 7 of T.7 N., R.26 W., MDM Santa Barbara County.

The same mixed conifer forest, montane chaparral, and bigcone Douglas-fir forests described for San Rafael Mountain are found in this 1000 acre area. In addition, however, there are extensive stands of canyon live oak woodland and Coulter pine *(Pinus coulteri)*/ chaparral.

- no grazing occurs in the area
- commercial timber species are present but unavailable because they are in Wilderness
- no oil and gas leases occur in the area.

### I2.2.2 Consequences

Designation: The consequences of designation are negligible because the area is in Wilderness. The Wilderness designation does not permit silvicultural activities or surface occupancy for oil and gas activities. Grazing would not be permitted for transitory range. Trail construction would not be permitted in Alternatives III, VI, and VII which have a recreation emphasis.

Non-designation: The values and resources of the area would be little-affected by non-designation since, as explained above, Wilderness constrains management activities.

## I3.0 Existing Botanical Special Interest Area

### I3.1 Cuesta Ridge

The area is located in portions of Sections 26, 27, 28, 34, 35, T. 29 S., R. 12 E., MDM in San Luis Obispo County.

Established in 1969, the Cuesta Botanical Area covers 1,330 acres of serpentinite Sargent cypress *(Cupressus sargentii)*, but also includes small stands of Coulter pine *(Pinus coulteri)*. In addition to being the largest area of Sargent cypress on the Forest, the

United States
Department of
Agriculture

Forest Service
Pacific Southwest
Region

Los Padres
National
Forest

# Record of Decision
# Final Environmental Impact Statement
# Land and Resource Management Plan

# Los Padres National Forest

**Watershed Protection**

The Plan contains considerable direction designed to ensure protection and improvement of watersheds. The foremost element in the strategy for watershed protection is a program of fuels management in chaparral primarily through prescribed fire. Prescribed fire can reduce the erosion and water quality impacts associated with chaparral wildfire. Over time the fuels management portion of the total fire budget will increase. The current level of prescribed burning averages about 8,000 acres each year; the Plan proposes an average of 25,000 acres treated yearly under prescription. Some of this burning will take place in Wilderness areas.

Other elements in the strategy for watershed protection include provisions for inventory and rehabilitation of disturbed or damaged watersheds; provisions for developing water quality baseline data and for water quality monitoring; and a set of Standards and Guidelines that will be used in the design and implementation of projects to protect water quality.

**Diversity of Ecosystems**

The Plan provides for diversity in ecosystems through management direction and through planned or recommended allocation of land.

Management direction that will help preserve overall ecosystem diversity includes prescribed fire, timber stand improvement, reforestation, riparian area management, and management of the visual resource. Prescribed fire improves age class and successional stage diversity in chaparral and maintains or improves the richness of fire-following species. Moreover, prescribed burning lessens the risk of crown fires in forested stands adjacent to chaparral. Timber stand improvement aids health and vigor of conifers through maintaining appropriate stocking levels and size class distribution and by reducing the potential for crown fires. Reforestation will restock formerly forested areas and will augment natural regeneration. In addition, a net increase of less than one road mile per year of Forest Development Roads is expected in the first decade. Standards have been developed to guide the maintenance and enhancement of riparian habitats Forest-wide.

Maintenance of visual quality is considered important throughout the Forest. This is particularly true along the Big Sur coast and adjacent to urban areas where visual resources are the focus of management direction.

Land allocations which will help preserve ecosystem diversity include Wilderness; Wild and Scenic Rivers; Research Natural Areas; Botanical, Cultural, and Geologic Areas; and National Natural Landmarks.

The existing Wildernesses (412,912 acres) and recommended Wildernesses (253,866 acres) will provide a set of large biogeographic areas across Los Padres National Forest. Four outstanding areas are recommended for addition to the National Wilderness Preservation System. As they are currently mapped, the recommended areas are manageable, have relatively few conflicts with other uses of the Forest, and are supported by the majority of the commenting public. Should Congress establish the additions recommended in the Forest Plan, 38 percent of Los Padres National Forest will be Wilderness.

-The recommended Garcia Wilderness is a 10,306-acre unit situated east of San Luis Obispo at the southern end of the Santa Lucia Mountains. The area is rugged, being dominated by steep terrain along Garcia Ridge and adjacent canyons. Dense chaparral and lush riparian habitat are characteristic of the recommended Garcia Wilderness. Solitude and serenity can be found but such opportunity is reduced by the sights and sounds of civilization detectable from Garcia Ridge. Overall the area has high wilderness values. Public comment strongly supports the Garcia Wilderness as it is currently delineated

-The recommended La Brea addition to the San Rafael Wilderness is a 16,516-acre parcel situated east of Santa Maria in the Sisquoc Canyon at the west boundary of the San Rafael Wilderness. The area is extremely rugged, being dissected by a number of steep canyons. Dense chaparral is characteristic of the La Brea Addition. Current recreational use is low. A number of sites of historic interest are present. Natural integrity is high, as is the opportunity for solitude and challenging primitive recreation. Expressed public opinion supports recommendation of the La Brea Wilderness. The area is considered a logical addition to the San Rafael Wilderness.

-The recommended Matilija Wilderness is a 30,107-acre parcel situated northwest of Ojai in the Matilija watershed. The area consists of broken terrain and spectacular rock outcrops on the slopes of steep canyons. Prior to the 1985 Wheeler Fire, the Matilija Wilderness was covered by dense chaparral vegetation. Current recreational use is low, which is thought to be an after-effect of the 1985 fire. The area supported abundant and diverse wildlife prior to the fire. Although such is not the case currently, the situation is expected to improve as the area recovers. The natural integrity of much of the area remains undisturbed and there are numerous opportunities for solitude and challenging primitive recreation. Overall wilderness character is high. Considerable local support has been expressed for establishment of a Matilija Wilderness.

-The recommended Sespe Wilderness is a 197,047-acre expanse situated astride the Sespe watershed north of Fillmore and Santa Paula. The area is exceptionally diverse consisting of rugged mountain and

valley terrain with extremely steep and precipitous topography. Coniferous forest is typical of higher elevations while chaparral dominates slopes. Even though recreation use is high, opportunity for solitude and isolated primitive recreation experience is very high. Overall wilderness character is very high, a fact given added importance by the area's proximity to southern California urban areas. Public support for the Sespe Wilderness is high despite the need to trade off oil and gas potential, water development potential, and established OHV use on the Johnston Ridge trail.

The Plan also recommends that certain land areas receive special management. These land areas are termed "Special Interest Areas." The protective management they will receive will help preserve ecosystem diversity.

-Wild or Scenic River status is recommended for portions of the Big Sur (14.4 mi), Sisquoc (31 mi), and Sespe (28.5 mi) Rivers. Multiagency study of Wild River status for the Little Sur River is recommended.

-Five Research Natural Areas are recommended: American Canyon (1500 ac), San Emigdio Mesa (1200 ac), Wagon Caves (150 ac), Black Butte (2955 ac), and Ventana Cones (1400 ac). Two others are the subject of continuing study: San Rafael Mtn. (1300 ac) and Big Pine Mtn. (100 ac). The Cone Peak Gradient was recently established as a RNA (2955 ac).

-Five Botanical Areas are added: Alder Creek (75 ac), Lion Den Spring (85 ac), Mt. Pinos Summit (510 ac), Southern Redwood (10 ac), and Dry Lakes Ridge (450 ac). They will join the existing Cuesta Botanical Area (1300 ac).

-Quatal Canyon (2536 ac) is added as a Geologic Special Interest Area and is recommended as a National Natural Landmark.

-The Sierra Madre Ridge is added as a Cultural Resource Special Interest Area (5772 ac).

-The Cone Peak-Limekiln Creek area is recommended as a National Natural Landmark (2955 ac); it partially overlaps the existing California Coast Ranges Biosphere Reserve (15,933 ac).

**Productivity and Diversity of Wildlife and Fisheries Habitat**

Maintaining and improving the productivity and diversity of wildlife habitat is a major emphasis of the Forest Plan. Forest-wide standards and guidelines and fisheries and wildlife management programs are the major tools the Forest will use toward that end.

The Forest-wide standards and guidelines for fish and wildlife are built around three key ideas: maintenance of viable populations of all species, maintenance and enhancement of riparian habitats, and recovery of threatened, endangered, and sensitive species.

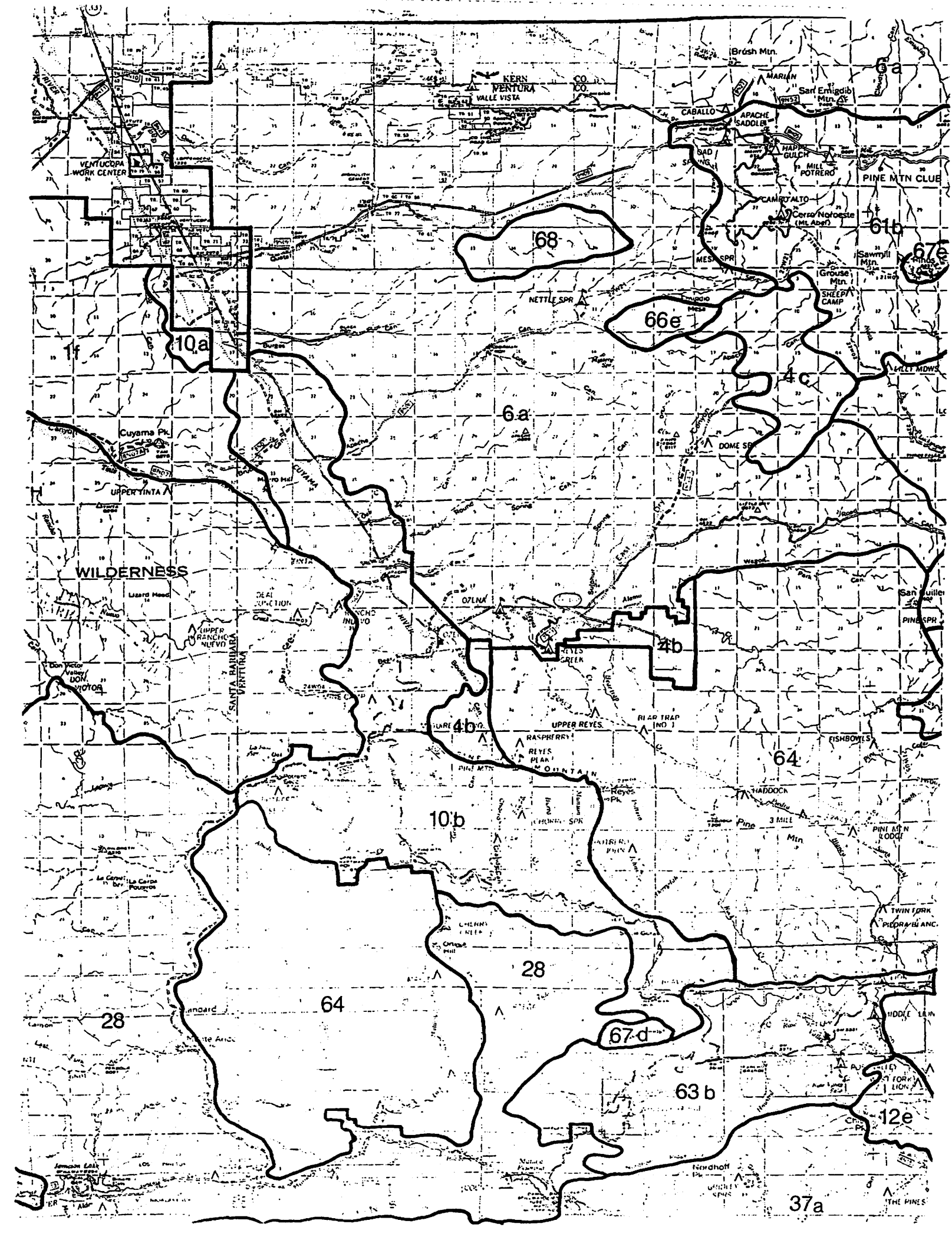
Program activities that benefit wildlife habitat diversity and productivity include chaparral management, primarily prescribed fire; development of water sources, creation of openings, planting of mixed plant species, and maintenance or retention of needed snags and dead and down woody material. Prescribed burning improves wildlife habitat in chaparral by increasing age class diversity, the amount of edge, and the number of openings.

Management of populations of threatened and endangered species, along with reintroductions of native species no longer present on the Forest ("extirpated"), will also be emphasized. Recovery efforts will be emphasized for the California Condor and Peregrine Falcon. Tule Elk and Nelson Big Horn Sheep will continue to be reintroduced. Direction is also provided for the protection of the Southern Spotted Owl.

Projects designed to improve fisheries habitat and productivity will concentrate on the anadromous steelhead fishery, primarily in Monterey County. These projects include installation of instream structures to create needed pools or collect spawning gravels, removal of barriers to fish passage, planting of riparian overstory to reduce instream temperatures, and control or removal of other activities which are causing degradation of fishery productivity. Prescribed burning will also enhance the timing, quality, and amount of water in streams.

**Diversity of Recreation Opportunity**

The Plan responds to public demand for a variety of recreation opportunities. The overall emphasis is toward general forest recreation. Opportunities of this type typically do not involve developed facilities or motor vehicles, but do involve roads and trails and undeveloped forest. Hiking, viewing scenery, hunting, and cross-country skiing are examples of general forest recreation. The large amount of Wilderness acreage on Los Padres, substantially increased by the Plan, will be a focus of much of this type of general forest recreation. The Plan provides the framework for developing additional trails and improvements which will enhance general forest recreation. The prescribed burning program is expected to reduce the amount of Forest land subject to seasonal fire closure; this, in turn, should enhance hunting and other general forest recreation opportunities in the future. Somewhat less emphasis is placed on recreation opportunities which depend on developed facilities. Developed facilities include campgrounds, picnic areas, and observation sites. In the first ten years the backlog of recreation sites in need of rehabilitation will be corrected. Additional capacity will be developed, primarily in day-use facilities. The Plan provides for a high level of management of developed facilities which receive heavy to moderate


KERN CO.
VENTURA CO.
VALLE VISTA
Brush Mtn.
MARIAN
San Emigdio Mtn.
CABALLO
APACHE SADDLE
HAPPY GULCH
MILL POTRERO
PINE MTN CLUB
VENTUCOPA WORK CENTER
CAMPO ALTO
Cerro Noroeste (Mt. Abel)
MESA SPR
Sawmill Mtn.
Grouse Mtn.
SHEEP CAMP
NETTLE SPR
Cuyama Pk.
UPPER YINTA
DOME SPR
WILDERNESS
Lizard Head
UPPER RANCHO NUEVO
SANTA BARBARA
VENTURA
OZENA
Alamo
RAYES CREEK
Don Victor Valley
DON VICTOR
UPPER REYES
RASPBERRY
REYES PEAK
MOUNTAIN
BEAR TRAP SPR
FISHBOWLS
HADDOCK
Reyes Pk.
3 MILE
Pine Mtn.
PINE MTN LODGE
TWIN FORK
PIEDRA BLANCA
MIDDLE LION
FORK LION
Nordhoff
THE PINES
68
66e
61b
67e
10a
1f
6a
4c
4b
10b
64
28
67d
63b
12e
37a

United States Department of Agriculture | Forest Service | Los Padres National Forest | SO

Reply to: 1920 Date: November 20, 1993

Subject: Amendments #1 and #2 to Forest Land & Resource Management Plan

To: District Rangers

On November 17, I signed a Decision Notice and a Finding of No Significant Impact (FONSI) approving minor Amendments #1 and #2 to the Forest Land and Resource Management Plan. The formal forty-five day appeal period begins tomorrow.

Please make the necessary changes to your copies of the Forest Plan. You should also make Plan changes required by passage of PL 102-301.

DAVID W. DAHL
Forest Supervisor

Enclosure:

AMENDMENT #1 REQUIRES THE FOLLOWING ADJUSTMENTS:

In the Forest Plan on Page 4-~~9~~ 11, Section 4.3.2.6 Vegetation, add the following Standards:

7. Permit no increase in grazing for three seasons following wild or prescribed fire.

8. Discourage grazing on burned chaparral areas (transitional range) during the first three year period through management actions such as appropriate placement of salting locations.

9. Refrain from construction of new water developments for livestock within transitional areas within the three year period after a wild or prescribed fire unless such developments are needed for resource protection.

10. Leave natural barriers to limit access, where appropriate.

In the Forest Plan on Page 4-11, Section 4.3.2.11 Range, add the following Standards:

5. Type conversion projects proposed by range permittees will be funded by the permittee.

6. Type conversion projects funded by the Forest Service will be primarily for water yield purposes and fuel reduction for watershed protection. Any such project will require full compliance with NEPA and 36 CFR 219.27g.

In the Forest Plan on Page 4-9, Section 4.3.2.6 Vegetation rewrite Standard #1. to read:

Give preference to native species. In cases where local native materials are prohibitively expensive or unavailable in the quantity demanded, the Forest Ecologist will be consulted. Care will be taken to choose species which are not "weedy" or aggressive.

To this section also add the following:

7. Minimize the use of post-wildfire seeding for watershed protection. When seeding is necessary, use the lowest seeding rates that will provide this protection.

8. Monitor the effectiveness of various rates of seeding.

9. Prepare annual status reports for any post-fire seeding that may have occurred.

## AMENDMENT #2 IDENTIFIES THE FOLLOWING RIVERS FOR ELIGIBILITY & SUITABILITY:

| | River | Location |
|---|---|---|
| | 1. Piru Creek* | Source to Pyramid Reservoir and Pyramid Dam to Piru Reservoir. |
| | 2. Little Sur* | Source to Pacific Ocean. |
| | 3. Upper Sespe Creek* | Segment 1 and upper Segment 2 to Rock Creek |
| | 4. Arroyo Seco River | Headwaters to Forest boundary. |
| | 5. Tassajara Creek | Headwaters to Arroyo Seco River. |
| | 6. Lopez Creek* | Headwaters to Lopez Reservoir. |
| | 7. Carmel River | Headwaters to Forest boundary. |
| | 8. Santa Ynez River | Headwaters to Forest boundary. |

## RIVERS TO BE EVALUATED FOR ELIGIBILITY PRIOR TO FOREST PLAN REVISION

| | River | Location |
|---|---|---|
| | 9. Manzana Creek | Headwaters to Sisquoc River. |
| | 10. So.Fork Sisquoc River | Headwaters to Sisquoc River. |
| | 11. Matilija Creek* | Headwaters to junction with Murietta Canyon. |
| | 12. Santa Cruz Creek | Headwaters, including west and east forks, to Forest boundary. |
| | 13. Indian Creek | Headwaters to Mono debris basin. |
| | 14. Santa Paula Creek | Headwaters of main and east fork to Forest boundary. |
| | 15. Mono Creek | Headwaters to Mono debris basin. |
| | 16. La Brea Creek | Headwaters of north and south fork to Forest boundary. |

* = Wild and Scenic River study segments as directed by Congress, Los Padres Condor Range and River Protection Act of 1992 (PL 102-301)

eligible

AMENDMENT #2 ADDS MANAGEMENT AREA 71 TO THE FOREST PLAN(

## MANAGEMENT AREA 71

MANAGEMENT EMPHASIS: Potential Wild & Scenic River Candidates

All listed rivers will be managed as "Wild", to the extent feasible, pending an eligibility determination. Each river or river segment found to be eligible will be managed under its appropriate classification (Wild, Scenic or Recreation) pending a determination of suitability. Streams found to be suitable will be managed using this direction pending Congressional action.

Streams which are not eligible, not suitable or which are not recommended by the President and approved by Congress for inclusion in the Wild and Scenic Rivers System, will be managed under the direction for the Management Areas(s) through which the river passes. Any listed river will be evaluated sooner than scheduled if an activity is proposed that would adversely affect its natural river values.

This Management Area direction is in addition to the Forest-wide management direction (pages 4-6 to 4-14) and the direction given for the Management Areas through which the river segment passes (ie. Wilderness Area Prescription 64 applies to all river segments in Wilderness). (The following Standards and Guidelines will begin on page 4-175 of the Forest Plan.)

### "WILD" RIVER MANAGEMENT STANDARDS AND GUIDELINES

General: Stream segments that are considered potentially Wild will be left to the forces of nature. Exceptions include work to protect soil, water and wildlife habitat (including the use of prescribed fire) and to maintain overlooks and vistas.

Cultural Resources/ Mgmt. Practices 1,2,3

Carry out a sample inventory of cultural resources, emphasizing post-wildfire and post-prescribed fire surveys.

Emphasize protection of cultural properties within sensitive areas to reduce vandalism and natural deterioration.

Evaluate the significance of inventoried cultural properties.

Recreation/ Mgmt. Practices 41,43,44,46

Manage the stream corridor to achieve the recreation objectives of the Management Areas through which it passes.

Recreation developments are limited to simple convenience facilities (ie. stoves tables and primitive toilets). New structures are not allowed. Existing recreation uses may continue pending completion of suitability studies and/or Congressional action.

"WILD" RIVER MANAGEMENT STANDARDS AND GUIDELINES

Recreation/ Mgmt. Practices 41,43,44,46 (continued)

Limit off highway vehicle activities to existing designated roads and rails. If a river is designated Wild by Congress, such routes will be evaluated to determine need and suitability.

Visual Resources/ Mgmt. Practices 5,6

Manage the stream corridor to generally achieve a Visual Management Objective of Preservation. Existing low standard roads or structures will be managed to maintain the naturally appearing, essentially primitive character of the river area. Where access to private lands or mineral rights is required, such activities must be conducted in a manner that will minimize visual impairments.

Changes resulting from human influence will be kept as naturally appearing as possible.

Fish and Wildlife/ Mgmt. Practices 10,11,38

Manage fish and wildlife habitat in a manner consistent with the Management Areas through which the stream corridor passes and consistent with forest-wide riparian area direction. Low impact structures associated with fisheries enhancement and riparian area protection are allowed.

Maintain fisheries habitat for viable populations of native fish species.

Prevent destruction or adverse modification of habitat essential to Sensitive and T & E species.

Range Resource/ Mgmt. Practices 14,15

Limit grazing to current levels as identified in individual grazing allotment plans. Forage improvement projects are not appropriate. Areas outside existing allotments will not be made available for grazing. Low impact structures necessary for riparian area protection are allowed.

Watershed/ Mgmt. Practices 23,24

Meet or exceed State water quality standards for aesthetics, propagation of fish and wildlife normally adapted to habitat of the stream, and primary contact recreation, except where exceeded by naturally occurring conditions.

Watershed/ Mgmt. Practices 23,24

Protect the present character of streams by not allowing stream impoundments or any alterations to natural stream course pending a determination of suitability for Wild and Scenic River status. Existing in-stream structures may be maintained. To the extent of Forest Service authority, no development of hydroelectric power facilities will be permitted.

Resource management practices are limited to those which are necessary for protection, conservation, rehabilitation or enhancement of river area resources. Flow measurement devices are permitted provided that the area remains natural in appearance.

## "WILD" RIVER MANAGEMENT STANDARDS AND GUIDELINES

### Landownership/ Mgmt. Practices 25,27,28,

For designated Wild and Scenic Rivers, acquire private lands or interests therein from owners who desire to sell, where desirable to enhance opportunities for public use, or to protect resource values such as water quality.

New power transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new right-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.

### Transportation/ Mgmt. Practices 25,31,32

Trail maintenance will conform to the standards and guidelines of the Management Areas through which the corridor passes.

The area is generally inaccessible except by trail. New roads will not be built.

### Timber/ Mgmt. Practices 19,20,21,22

Cutting of trees is not permitted except in association with a primitive recreation experience (ie. clearing for trails and protection of users) or for resource protection (ie. fire suppression, insect and disease control).

### Fire/ Mgmt. Practices 35,36,37,38

Use preventability indices, initial attack objectives and burned acreage targets (for the Management Areas through which the corridor passes) to hold unplanned ignitions within tolerable loss limits. (See Appendix E.)

Use prescribed fire when such use will achieve one or more Wild River management objectives.

The use of tractors in support of fire suppression or prescribed burning requires the prior approval of the Forest Supervisor.

### Minerals/ Management Practices 48,49,50,51

Existing, valid mining claims will be managed consistent with mining law and subject to 36 CFR 228. Valid claims must be operated in a manner that minimizes surface disturbance and visual impairment. Reasonable access is permitted.

Oil and gas leasing may be permitted when consistent with the Management Area through which the stream corridor passes but with a provision for no surface occupancy.

No sand and gravel or other common variety materials may be removed from the stream channel.

"SCENIC" RIVER MANAGEMENT STANDARDS AND GUIDELINES

General: Manage stream so that changes resulting from human influence are unobstructive.

Cultural Resources/ Management Practices 1,2,3

Carry out a sample inventory of cultural resources, emphasizing post-wildfire and post-prescribed fire surveys.

Emphasize protection of cultural properties within sensitive areas to reduce vandalism and natural deterioration.

Evaluate the significance of inventoried cultural properties.

Recreation/ Management Practices 41,43,44,46

Manage the stream corridor to achieve the recreation objectives of the Management Areas through which it passes.

Moderate sized campgrounds, visitor information centers, administrative headquarters are allowed if structures are screened from the river. Any such developments are limited to relatively short segments of the river.

Off highway vehicle activities are permitted on designated roads and trails.

Visual Resources/ Management Practices 5,6

Manage the stream corridor to generally achieve a Visual Management Objective of "Retention". Facilities that support Scenic River designation, such as campgrounds, are allowed. Such facilities will be designed to generally meet a Visual Management Objective of "partial retention". Where access to private lands or mineral rights is required, such activities must be conducted in a manner that will minimize visual impairments.

Fish and Wildlife/ Management Practices 10,11,38

Manage fish and wildlife habitat in a manner consistent with the Management Areas through which the stream corridor passes and consistent with forest-wide riparian area direction.

Maintain fisheries habitat for viable populations.

Prevent destruction or adverse modification of habitat essential to Sensitive and T & E species.

Fish and Wildlife/ ManagementPractices 10,11,38

Structures associated with fisheries enhancement, riparian area protection, or wildlife habitat improvement that do not have an adverse effect on river values are allowed if consistent with the Management direction for the Management Area through which the stream corridor passes.

"SCENIC" RIVER MANAGEMENT STANDARDS AND GUIDELINES

Range Resource/ Management Practices 14,15

Manage grazing consistent with individual grazing plans. Forage improvement activities are generally limited to those that provide for resource protection or reduce conflict with recreation or wildlife use.

Areas outside existing grazing allotments are not available for grazing.

Watershed/ Management Practices 23,24

All water supply dams and diversions and flood control structures are prohibited. To the extent of Forest Service authority, no development of hydroelectric power facilities is permitted.

Maintain water quality at or above established State water quality standards.

Protect present character of the streams by not allowing stream impoundments or any alterations to natural stream course pending a determination of suitability for Wild and Scenic River status and Congressional action. Existing in-stream structures may be maintained.

Resource management practices are limited to those which are necessary for protection, conservation, rehabilitation or enhancement of the river area resources. Such features as trail bridges, fences, water bars and drainage ditches, flow measurement devices and minor structures or management practices are permitted. Structures that would have an adverse effect on river values are not be allowed.

Landownership/ Management Practices 25,27,28,

For desinated Wild and Scenic Rivers, acquire private lands or interests therein from owners who desire to sell, where desirable to enhance opportunities for public use, or to protect resource values such as water quality.

New power transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.

## "SCENIC" RIVER MANAGEMENT STANDARDS AND GUIDELINES

### Transportation/ Management Practices 25,31,32

Road and trail maintenance will conform to the standards and guidelines of the Management Areas through which the stream corridor passes.

Occasional road access is permitted. Roads may occasionally reach or bridge the river. Short stretches of inconspicuous roads are acceptable.

Elsewhere, facilities will conform to the direction for the Management Areas through which the stream corridor passes.

### Timber/ Management Practices 19,20,21,22

Timber management practices may be allowed provided they are compatible with the Management Areas through which the corridor passes and the stream can be maintained in a near natural condition. Emphasis is given to visual quality.

### Fire/ Management Practices 35,36,37,38

Use preventability indices, initial attack objectives and burned acreage targets (for the Management Areas through which the corridor passes) to hold unplanned ignitions within tolerable loss limits. (See Appendix E.)

Use prescribed fire when such use will achieve one or more Scenic River management objectives.

### Minerals/ Management Practices 48,49,50,51

Existing, valid mining claims are managed consistent with mining law and subject to 36 CFR 228. New mining claims are allowed if consistent with Management Area direction for the area through which the river passes.

All mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

Oil and gas leasing may be permitted where consistent with Management Area direction for the area through which the stream corridor passes with an added provision for no surface occupancy.

No sand and gravel or common variety minerals may be removed from the stream channel.

## "RECREATION" RIVER MANAGEMENT STANDARDS AND GUIDELINES

General: Maintain or improve a natural appearing river environment.

### Cultural Resources/ Management Practices 1,2,3

Carry out a sample inventory of cultural resources,emphasizing post-wildfire and post-prescribed fire surveys.

Emphasize protection of cultural properties within sensitive areas to reduce vandalism and natural deterioration.

Evaluate the significance of inventoried cultural properties.

### Recreation/ Management Practices 41,43,44,46

A full range of campgrounds and picnic areas may be established in close proximity to the river if compatible with the Management Area through which the stream corridor passes.

Off highway vehicle activities are permitted on designated roads and trails.

### Visual Resources/ Management. Practices 5,6

Manage the stream corridor to achieve the visual management objectives of the Management Area through which it passes.

### Fish and Wildlife/ Management Practices 10,11,38

Manage fish and wildlife habitat in a manner consistent with the Management Areas through which the stream corridor passes.

Maintain fisheries habitat for viable populations.

Prevent destruction or adverse modification of habitat essential to Sensitive and T & E species.

### Range Resource/ Management Practices 14,15

Maintain grazing opportunities as identified in individual grazing plans. Forage improvement projects emphasize reducing resource and recreation use conflicts.

### Watershed/ Management Practices 23,24

All water supply dams and diversions and flood control structures are prohibited.

Maintain water quality to meet State water quality standards.

Existing in-stream structures may be maintained provided the river maintains a generally natural riverine appearance. Resource management practices may provide for protection, conservation, rehabilitation or enhancement of the river area resources.

To the extent of Forest Service authority, no development of hydroelectric power facilities are permitted.

"RECREATION" RIVER MANAGEMENT STANDARDS AND GUIDELINES

Landownership/ Management Practices 25,27,28,

For designated Wild and Scenic Rivers, acquire private lands or interests therein from owners who desire to sell, where desirable to enhance opportunities for public use or to protect water quality.

Landownership/ Management Practices 25,27,28,

New power transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be on existing rights-of-way. Where new rights- of-way are indicated, the scenic, recreational, fish and wildlife values must be evaluated in the selection of the site.

Transportation/ Mgmt. Practices 25,31,32

Road and trail maintenance will conform to the standards and guidelines of the Management Areas through which the corridor passes.

Easy road access to the river is permitted. New roads may be built if consistent with management direction for the area through which the stream corridor passes.

Additional non-recreational facilities are permitted where called for by management direction for the area through which the stream corridor passes.

Timber/ Management Practices 19,20,21,22

Timber harvesting is allowed consistent with the Management Area and riparian area direction, provided that restrictions are applied to protect the immediate river environment.

Fire/ Management Practices 35,36,37,38

Use preventability indices, initial attack objectives and burned acreage targets (for the Management Areas through which the stream corridor passes) to hold unplanned ignitions within tolerable loss limits. (See Appendix E.)

Use prescribed fire when such use will achieve one or more Recreation River management objectives.

Minerals/ Management Practices 48,49,50,51

Existing, valid mining claims are managed consistent mining law and subject to 36 CFR 228. Valid claims must be conducted in a manner that minimizes surface disturbance and visual impairment. Reasonable access is permitted.

Mineral leasing may be allowed if consistent with the Management Area through which the stream corridor passes but must be conducted in a manner that minimizes surface disturbance and visual impairment.

No sand and gravel or common variety minerals may be removed from the stream channel.

OTHER CHANGES:

The Passage of PL 102-301, the Los Padres Condor Range and Rivers Act of 1992, makes it necessary to adjust a number of Management Area acreages and boundaries. The corrected Management Area Map (1993) displays the adjusted boundaries. Please make to following changes in your copy of the Forest Plan.

Management Area 3, pg. 4-23, is 27,517 acres.
Line 3, revise to read: "3a, seven miles of King City and adjacent to the boundary of the Ventana Wilderness".

Management Area 4, pg. 4-26, is 18,619 acres.
Line 3 should read: "4a, six miles southwest of Pine Canyon Station(SLRD)".
Delete line 5. There is longer a 4c.

Management Area 6, pg. 4-35, 169,375 acres.

Management Area 7 is 23,973 acres.

Management Area 11, pg. 4-49, is 40,280 acres.
Line 3 should now read"...San Luis Obispo between the Santa Lucia and Garcia Wilderness Areas (Santa Lucia RD); Delete line 4.

Management Area 12, pg. 4-54, is 61,589 acres.
Line 3 should now read "12a, three areas west of Greenfield...".

Management Area 14, pg. 4-64, is 5,691 acres.

Management Area 37, pg. 4-99, is 22,694 acres.

Management Area 42, pg. 4-114, is 5,910 acres.

Management Area 48, pg. 4-120, is 35,242 acres.

Management Area 52, pg. 4-131, is 10,247 acres.

Management Area 57, pg. 4-139, is 9,954 acres

Management Area 61, pg. 4-143, is 31,462 acres.
Line 5 should now read "61b...(Mount Pinos RD) adjacent to Chumash Wilderness."

Management Area 64, pg. 4-154, is 816,290 acres.
The Area Description should now read: "Management Area 64 consists of 10 designated Wilderness Areas. These are: the Ventana, Silver Peak, Santa Lucia, Garcia, Machesna, San Rafael, Dick Smith, Matilija, Chumash and Sespe.

Delete Paragraph 2 which starts with "Portions...".

Management Area 67, pg. 4-166, is 2,290 acres.
Delete Lines 3,4,5. These areas are now in the Silver Peak Wilderness.

Management Area 68, pg. 4-169, is now 436 acres.
Remainder of the area is now in the Chumash Wilderness.

Corrections to Page 4-15, Table 4.4-1

| Management Area/ Prescription | | Area |
|---|---|---|
| 3 | | 27,667 |
| 4 | | 18,619 |
| 6 | | 169,375 |
| 7 | | 23,973 |
| 11 | | 40,280 |
| 12 | | 61,589 |
| 14 | | 5,691 |
| 37 | | 22,694 |
| 42 | | 5,910 |
| 48 | | 35,242 |
| 52 | | 10,247 |
| 57 | | 9,954 |
| 61 | | 31,462 |
| 64 | (Wilderness) | 813,290* |
| 67 | | 2,290 |
| 68 | | 436 |
| 71 | (Wild & Scenic Rivers**) | |

* - Additional 3,000 acres of Sespe Wilderness located on Angeles N.F.

** - New Management Area direction for Wild and Scenic Rivers. Public Law 102-301 designated portions of the Big Sur, Sespe and Sisquoc as components of the Nation's Wild and Scenic River System. The legislation directed study of additional Rivers and Streams.

# APPENDIX 2

## Plant List of San Emigdio Mesa Research Natural Area

Taken from:

Parjikh, A. 1993. Ecological Survey Report, San Emigdio Mesa Candidate Research Natural Area Los Padres National Forest, Mt. Pinos Ranger District, Ventura County, California. Unpublished report on file at Los Padres National Forest SO, and Pacific Southwest Research Station, Albany CA.

Adapted to:

Hickman, J.C., (Ed.) 1993. The Jepson manual: higher plants of California. University of California Press, Berkeley and Los Angeles. 1400 p.

APPENDIX 2

Plant List of the San Emigdio Mesa Research Natural Area

| Family | Species Scientific Name |
|---|---|
| Apiaceae | *Lomatium mohavense* (J. Coulter & Rose) J. Coulter & Rose |
| Asclepiadaceae | *Asclepias* cf. *californica* E. Greene |
| Asteraceae | *Ancistrocarphus filagineus* A. Gray (ident. as *Stylocline filaginea*) |
| | *Artemisia dracunulus* L. |
| | *Artemisia tridentata* Nutt. |
| | *Chaenactis* sp. |
| | *Chrysothamnus nauseosus* (Pallus) Britton ssp. *hololeucus* (A. Gray) H.M. Hall & Clements |
| | *Coreopsis bigelovii* (A. Gray) H.M. Hall |
| | *Ericameria linearifolia* (DC.) Urb. & G. Wussow (ident. as *Haplopappus linearifolius*) |
| | *Eriophyllum confertiflorum* (DC.) A. Gray |
| | *Eriophyllum pringlei* A. Gray |
| | *Gnaphalium* cf. *palustre* Nutt. |
| | *Gutierrezia californica* (DC.) Torrey & A. Gray (ident. as *G. bracteata*) |
| | *Lasthenia californica* Lindley (ident. as *L. chrysostoma*) |
| | *Layia glandulosa* (Hook.) Hook. & Arn. (ident. as *L. glandulosa* ssp. *lutea*) |
| | *Microseris* sp.(ident. as M. linearifolia, unknown source) |
| | *Sonchus asper* (L.) Hill |
| | *Syntrichopappus lemmonii* (A. Gray) A. Gray |
| Boraginaceae | *Cryptantha circumcissa* (Hook. & Arn. ) I.M. Johnston (low pungent leaves) |
| | *Cryptantha* sp. (shorter, condensed inflorescense) |
| | *Cryptantha* sp. (tall, slender) |
| | *Pectocarya penicillata* (Hook. & Arn.) A. DC. |
| | *Pectocarya setosa* A. Gray |
| Brassicaceae | *Arabis pulchra* M.E. Jones |
| | *Erysimum capitatum* (Douglas) E. Greene |
| Caprifoliaceae | *Lonicera subspicata* Hook & Arn. var. *denudata* Rehder or *Symphoricarpos rotundifolius* A. Gray var. *parishii* (Rydb.) Dempster (ident. as *L. johnstonii/S. parishii*) |
| Caryophyllaceae | *Minuartia douglasii* (Torrey & Gray) Mattf. (ident. as *Arenaria douglasii*) |
| Chenopodiaceae | *Chenopodium californicum* (S. Watson) S. Watson |
| Cupressaceae | *Juniperus californica* Carrière |
| Cyperaceae | *Carex* cf. *praegracilis* W. Boott |
| | *Eleocharis parishii* Britton |
| | *Scirpus pungens* Vahl |

| | |
|---|---|
| Ephedraceae | *Ephedra californica* S. Watson |
| Ericaceae | *Arctostaphylos glauca* Lindley |
| Fabaceae | *Astragalus purshii* Hook. var. *tinctus* M.E. Jones |
| | *Lotus humistratus* E. Greene |
| | *Lotus oblongifolius* (Benth.) E. Greene |
| | *Lotus procumbens* (E. Greene) E. Greene |
| | *Lotus scoparius* (Nutt.) Ottley |
| | *Lotus strigosus* (Nutt.) E. Greene (ident. as *L. strigosus* var. *hirtellus*) |
| | *Lotus wrangelianus* Fischer & C. Meyer (ident. as *L. subpinnatus*) |
| | *Lupinus concinnus* J. Agardh |
| | *Lupinus excubitus* M.E. Jones (ident. as *L. excubitus* var. *austromontanus* or var. *formosus*) |
| | *Lupinus microcarpus* Sims var. *microcarpus* (ident. as *L. ruber*) |
| | *Pediomelum californicum* (S. Watson) Rydb. (ident as *Psoralea californica*) |
| Fagaceae | *Quercus john-tuckeri* K. Nixon & C.H. Muller (ident. as *Q. turbinella* ssp. *californica*) |
| Hydrophyllaceae | *Emmenanthe penduliflora* Benth. |
| | *Eriodictyon crassifolium* Benth. var. *nigrescens* Brand (ident. as *E. crassifolium* var. *demudatum*) |
| | *Phacelia cicutaria* E. Greene |
| | *Phacelia curvipes* S. Watson |
| | *Phacelia distans* Benth |
| | *Phacelia douglasii* (Benth) Torrey |
| | *Phacelia egena* (Brand) J. Howell |
| | *Phacelia fremontii* Torrey |
| Juncaceae | *Juncus mexicanus* Willd. |
| Lamiaceae | *Salvia columbariae* Benth. |
| | *Stachys* sp. |
| Liliaceae | *Calochortus kennedyi* Porter |
| | *Allium fimbriatum* S. Watson var. *fimbriatum* |
| | *Muilla maritima* (Torrey) S. Watson |
| | *Yucca* cf. *schidigera* K.E. Ortigies |
| | *Zigadenus brevibracteatus* (M.E. Jones) H.M. Hall |
| Loasaceae | *Mentzelia pectinata* Kellogg |
| Onagraceae | *Camissonia campestris* (E. Green ) Raven |
| | *Camissonia* cf. *micrantha* (Sprengel) Raven |
| | *Camissonia* cf. *strigulosa* (Fischer & C. Meyer) Raven |
| Orobanchaceae | *Orobanche fasciculata* Nutt. (on *Eriogonum wrightii*) |
| Pinaceae | *Pinus monophylla* Torrey & Frémont |
| Poaceae | *Bromus madritensis* L. ssp. *rubens* (L.) Husnot (ident. as *B. rubens*) |
| | *Bromus tectorum* L. |

| | |
|---|---|
| Poaceae cont. | *Elymus multisetus* (J.G. Smith) Burtt Davy (ident. as *Sitanion jubatum*) |
| | *Leymus* cf. *condensatus* (C. Presl) A. Löve (ident. as *Elymus condensatus*) |
| | *Melica imperfecta* Trin. |
| | *Poa secunda* J.S. Presl ssp. *secunda* (ident. as *P. scabrella*) |
| Polemoniaceae | *Eriastrum sparsiflorum* (Eastw.) H. Mason |
| | *Gilia* cf. *interior* (H. Mason & A.D. Grant) A.D. Grant (large, lavender flower) |
| | *Gilia* sp. (small, dark pink-magenta flower) |
| | *Linanthus aureus* (Nutt.) E. Greene |
| | *Linanthus dichotomus* Benth. |
| | *Phlox gracilis* E. Greene (ident. as *Microsteris gracilis*) |
| Polygonaceae | *Centrostegia thurberi* Benth. (ident. as *Chorizanthe thurberi*) |
| | *Eriogonum fasciculatum* Benth. ssp. *polifolium* (A. DC.) Torrey & A. Gray |
| | *Eriogonum kennedyi* S. Watson |
| | *Eriogonum nudum* Benth. var. *pubiflorum* Benth. |
| | *Eriogonum wrightii* Benth. ssp. *subscaposum* S. Watson |
| | *Mucronea perfoliata* (A. Gray) A.A. Heller |
| Portulaceae | *Calyptridum monandrum* Nutt. |
| | *Claytonia perfoliata* Willd. |
| Ranunculaceae | *Ranunculus cymbalaria* Pursh |
| Rhamnaceae | *Rhamnus californica* Eschsch. |
| Rosaceae | *Cercocarpus betuloides* Torrey & A. Gray |
| Rubiaceae | *Galium andrewsii* A. Gray |
| | *Galium aparine* L. |
| Salicaceae | *Salix laevigata* Bebb |
| Scrophulariaceae | *Castilleja subinclusa* E. Greene ssp. *subinclusa* (ident. as *C. jepsonii*) |
| | *Collinsia bartsiaefolia* Benth. var. *davidsonii* (Parish) V. Newsom |
| | *Collinsia callosa* Parish |
| | *Mimulus guttatus* D.C. |
| | *Mimulus johnstonii* A.L. Grant |
| | *Pedicularis* sp. |
| | *Penstemon centranthifolius* (Benth.) Benth. |
| | *Penstemon grinnellii* Eastw. ssp. *scrophularioides* (M.E. Jones) N. Holmgren |
| | *Penstemon laetus* A. Gray |
| | *Veronica americana* (Raf.) Schwein. |
| Urticaceae | *Urtica dioica* L. ssp. *holosericea* (Nutt.) Thorne (ident. as *U. holosericea*) |
| Violaceae | *Viola purpurea* Kellogg |

# APPENDIX 3

## Wildlife Habitat Relationship Model
## List of species that may occur in the San Emigdio Mesa Research Natural Area

Derived from:

Timossi, Irene, Programmer. 1989. Statewide Wildlife Habitat Relationship Database System (version 8/8/89), California Department of Fish and Game, Resources Agency, State of California.

# WILDLIFE HABITAT RELATIONSHIPS

1983

* - Preferred Habitat during breeding season

E - Low successional stage essential (early)

L - High successional stage essential (late)

## Grassland (Annual)

### Mammals (61)

Vagrant Shrew
Dusky Shrew
Ornate Shrew
Broad-Footed Mole
Yuma Myotis
Fringed Myotis
Long-legged Myotis (L)
California Myotis
Small-Footed Myotis
Silver Haired Bat (L)
Western Pipistrel
Big Brown Bat (L)
Red Bat (L)
Hoary Bat
Townsend's Big Eared Bat
Pallid Bat
Brazillian Free-Tailed Bat (E)
Western Mastiff Bat
Brush Rabbit (*)
Desert Cottontail
Black Tailed Jackrabbit (E)
Mojave Ground squirrel
California Ground Squirrel
Round-Tailed Ground Squirrel
California Ground Squirrel (*)
Golden-Mantled Ground Squirrel (*)
White-Tailed Antelope Squirrel (*)
San Joaquin Antelope Squirrel (*)
Southwestern Pocket Gopher (*)
San Joaquin Pocket Mouse (*)
San Diego Pocket Mouse (*)
California Pocket Mouse (*)
Heerman's Kangaroo Rat (*)
Panamint Kangaroo Rat
Stephen's Kangaroo Rat (*) (E)
Giant Kangaroo Rat (*)
Merriam's Kangaroo Rat
San Joaquin Kangaroo Rat (*)
Narrow-Faced Kangaroo Rat (*)
Big Eared Kangaroo Rat
Western Harvest Mouse (*)
Deer Mouse
Southern Grasshopper Mouse (*)

Red-legged Frog
Banded Gecko
Coast Horned Lizard
Western Fence Lizard
Granite Spingy Lizard
Side-Blotched Lizard
Souther Alligator Lizard
California Legless Lizard
Granite Night Lizard
Orange Throat Whiptail (E)
Western Skink
Western Blind Snake
Glossy Snake
Racer
Ringbeck Snake
Night Snake
Common Kingsnake
California Mountain Kingsnake
Coachwhip
Striped racer
Gopher Snake
Longnose Snake
Western Patchnose Snake (*)
Western Blackhead Snake
Western Aquatic Garter Snake
Western Terrestrial Garter Snake
Common Garter Snake
Lyre Snake (*)
Speckled Rattlesnake
Red Diamond Rattlesnake (*)
Western Rattlesnake

## PINYON - JUNIPER

### MAMMALS (55)

Vagrant Shrew
Desert Shrew (L)
Yuma Myotis (*)
Long-Eared Myotis (L)
Fringed Myotis (*)
Long-legged Myotis (L)
California Myotis (*)
Small-Footed Myotis
Silver-Haired Bat (*L)
Western Pipistrel
Big Brown Bat (L)
Hoary Bat
Townsend's Big-Eared Bat (*)
Pallid Bat
Brazilian Free-Tailed Bat (*E)

Pocket Free-Tailed Bat
Desert Cotton Tail
Black-Tailed Jack Rabbit (*E)
Rock Squirrel (*)
California Ground Squirrel
White-Tailed Antelope Squirrel
Panamint Chipmunk (*)
Chaparral Chipmunk (*)
Southwestern Pocket Gopher
Little Pocket Mouse
Yellow-eared Pocket Mouse
Heerman's Kangaroo Rat
Panamint Kangaroo Rat
Merriam's Kangaroo Rat
Pacific Kangaroo Rat
Narrow-Faced Kangaroo Rat
Chisel-Toothed Kangaroo Rat (L)
Western Harvest Mouse
California Mouse
Canyon Mouse (*)
Cactus Mouse (*)
Deer Mouse
Brush Mouse
Pinyon Mouse
Southern Grasshopper Mouse
Desert Wood Rat
Dusky-Footed Wood Rat
Porcupine
Coyote
Kit Fox
Gray Fox
Black Bear
Long-Tailed Weasel
Badger
Western Spotted Skunk
Mountain Lion
Bobcat
Feral Ass
Mule Deer
Mountain Sheep

## BIRDS (88)

Turkey Vulture
California Condor
Goshawk
Sharp-Shinned Hawk
Cooper's Hawk
Red-Tailed Hawk
Swainson's Hawk
Merlin
American Kestrel
Chukar

California Quail (L)
Mountain Quail (L)
Golden Eagle (*)
Mourning Dove
Greater Roadrunner
Barn Owl
Screech Owl
Flammulated Owl
Great Horned Owl
Pygmy Owl
Poor-Will
Common Nighthawk
Black Swift
Vaux's Swift
White-Throated Swift
Anna's Hummingbird
Broad-Tailed Hummingbird (*)
Rufous Hummingbird
Common Flicker
Lewis' Woodpecker
Yellow-Billed Sapsucker
Williamson's Sapsucker
Hairy Woodpecker (E)
Downey Woodpecker (E)
Ladder-Backed Woodpecker
Cassins Kingbird (E)
Ash-Throated Flycatcher
Says Phoebe (E)
Hammond's Flycatcher
Gray Flycatcher (*)
Western Flycatcher (L)
Violet-Green Swallow
Rough-Winged Swallow
Barn Swallow
Stellar's Jay
Scrub Jay
Pinyon Jay (*)
Clark's Nutcracker
Mountain Chickadee
Plain Titmouse
Common Bushtit
White-Breasted Nuthatch
Red Breasted Nuthatch
Brown Creeper
Crissal Thrasher
Hermit Thrush
Western Bluebird
Mountain Bluebird (*)
Townsend's Solitare (*)
Blue-Gray Gnatcatcher
Golden Crowned Kinglet
Ruby-Crowned Kinglet
Loggerhead Shrike (E)
Gray Vireo (*)

Solitary Vireo
Virginia's Warbler (*)
Black-Throated Gray Warbler (*)
Townsend's Warbler (E)
Scott's Oriole
Northern Oriole
Brewer's Blackbird
Brown-Headed Cowbird
Western Tanager
Hepatic Tanager (*)
Black-Headed Grossbeak (*)
Lazuli Bunting
Evening Grossbeak
Cassin's Finch
Housefinch
Pine Siskin
Lesser Goldfinch (*)
Lawrence's Goldfinch
Lark Sparrow
Dark-Eyed Junco (E)
Gray-Headed Junco (*)
Chipping Sparrow
Fox Sparrow (L)

AMPHIBIANS AND REPTILES (39)

California Tiger Salamander
Ensatina (Yellow-blotched, Monterey, Large-blotched)
California Slender Salamander
Blackbelly Slender Salamander
Tehachapi Slender Salamander
Western (California) Toad
Southwestern Toad
Red-Spotted Toad
Red-legged Frog
Desert Tortoise
Banded Gecko
Longnose Leopard Lizard (Cope & Longnose)
Banded Rock Lizard
Sagebrush Lizard
Desert Spiny Lizard
Western Fence Lizard
Granite Spiny Lizard
Side-Blotched Lizard
Southern Alligator Lizard
California Legless Lizard (Black, Silvery)
Western Whiptail (Coastal, California, Great Basin) (E)
Gilbert's Skink (Western Redtail Skink)
Western Skink (Coronado Island, Western)
Western Blind Snake (Desert, Southwestern)
Ringneck Snake (San Bernadino, San Diego, Monterey)
Common Kingsnake (California Desert)
California Mountain Kingsnake (3 subspecies)
Coachwhip (Red, San Joaquin)

Striped Racer (California)
Striped Whipsnake (Desert)
Gopher Snake (4 Subspecies)
Longnose Snake (Western)
Western Patchnose Snake (3 Subspecies)
Lyre Snake (2 subspecies)
Western Diamondback Rattlesnake
Speckled Rattlesnake (2 subspecies) (*)
Red Diamondback Rattlesnake
Mojave Rattlesnake
Western Rattlesnake (2 subspecies)

## MIXED CHAPARRAL

### MAMMALS (59)

Opossum
Vagrant Shrew
Ornate Shrew
Trowbridges Shrew (L)
Broad-Footed Mole
Yuma Myotis
Long-Eared Myotis
Fringed Myotis
Long-legged Myotis (L)
California Myotis
Small-Footed Myotis
Western Pipistrel
Big Brown Bat (L)
Red Bat (L)
Hoary Bat
Townsend's Big Eared Bat
Pallid Bat
Brazillian Free-Tailed Bat (E)
Western Mastiff Bat
Brush Rabbit (*)
Desert Cottontail (*)
Black-Tailed Jack Rabbit (E)
California Ground Squirrel
Lodgepole Chipmunk (*)
Merriams Chipmunk
Chaparral chipmunk (*)
Western Gray Squirrel
Southwestern Pocket Gopher
Little Pocket Moouse
White-Eared Pocket Mouse
San Diego Pocket Mouse
California Pocket Mouse
Heerman's Kangaroo Rat
Pacific Kangaroo Rat
Narrow-Faced Kangaroo Rat (*)
Big-Eared Kangaroo Rat (*)

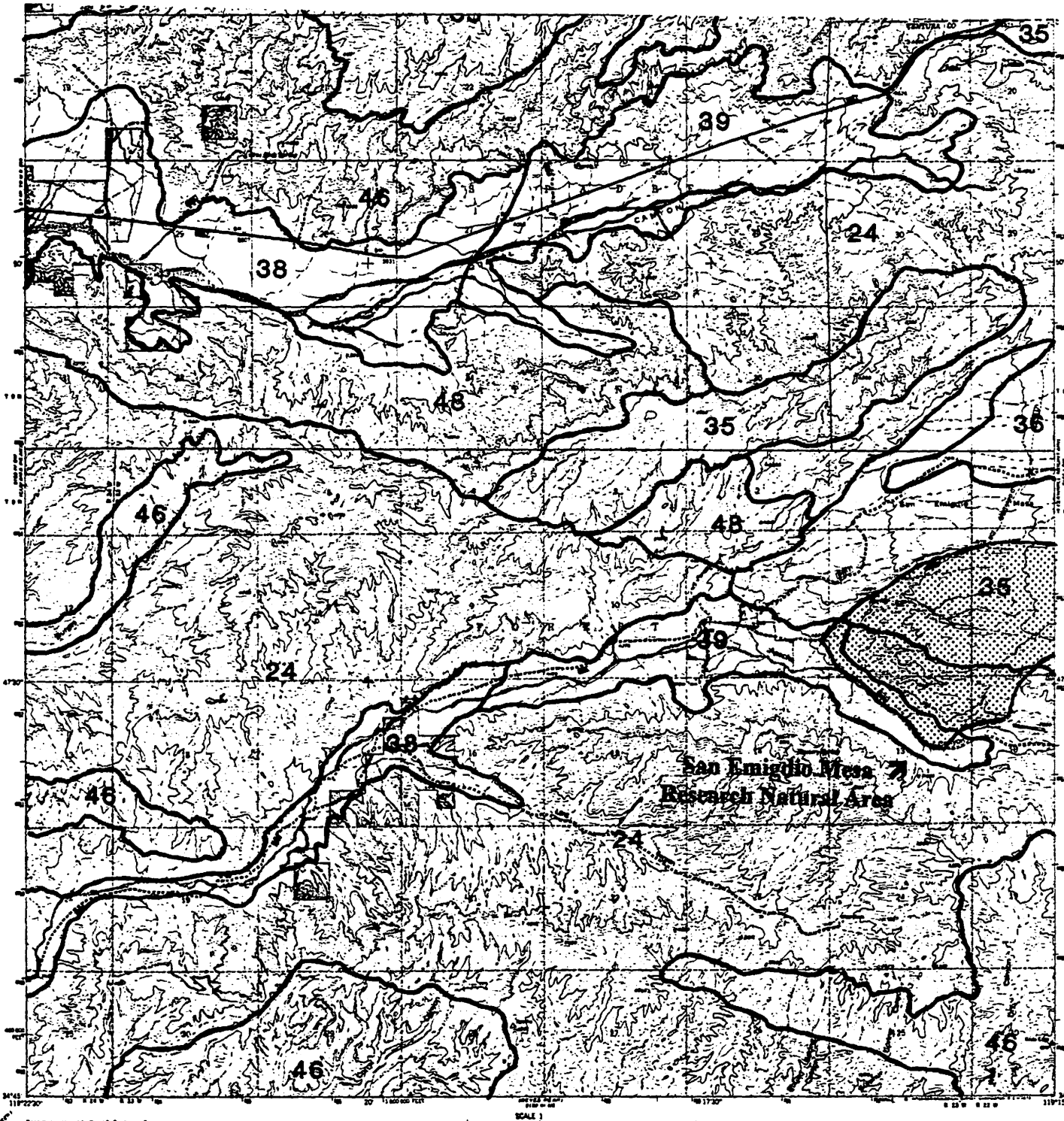
# APPENDIX 4

Soil maps and descriptions for San Emigdio Mesa Research Natural Area

Taken from:

O'Hare, J.P. and B.G. Hallock. 1987 Soil Survey of Los Padres National Forest Area, California. USDA Forest Service and Soil Conservation Service, in cooperation with the Regents of the University of California (Agricultural Experiment Station). 294 p.

# Appendix 4. San Emigdio Mesa Research Natural Area
# Soil map and descriptions

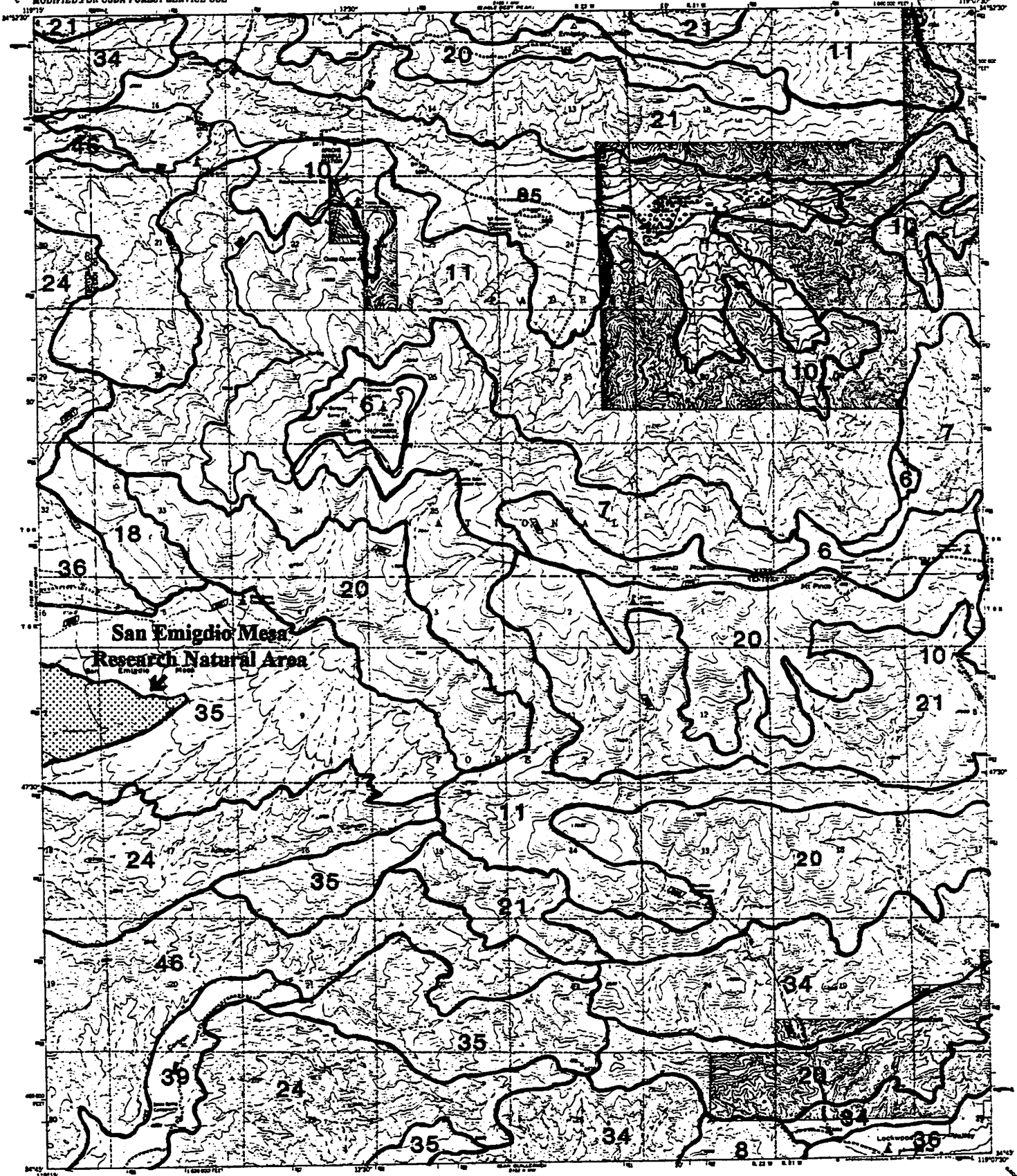



APACHE CANYON, CALIF.
N3445—W11915/7.5
191-4C
SHEET 64

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
MODIFIED FOR USDA FOREST SERVICE USE

# SOIL SURVEY OF
# LOS PADRES NATIONAL FOREST AREA, CALIFORNIA

BAWMILL MOUNTAIN QUADRANGLE
CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)




Base map prepared by the U.S. Geological Survey
Control by USGS, USC&GS, and USFS
Topography from aerial photographs by photogrammetric methods
Aerial photographs taken 1943 Field check 1943
Polyconic projection. 1927 North American datum
10,000-foot grid based on California coordinate system, zone 5
1000-meter Universal Transverse Mercator grid ticks,
zone 11, shown in blue
Dashed land lines indicate approximate locations
National Forest shown by generalized boundary
Private ownership not shown within National Forest
Map photorevised 1973
No major culture or drainage changes observed
Modification to USGS base map by the Geographics Service Center from 1978 aerial photography and 1979 supervision (publish) furnished by the Forest Service
Landnet revised according to additional Forest Service evidence

SCALE 1

CONTOUR INTERVAL 80 FEET

LEGEND

TOWNSHIP AND SECTION LINE CLASSIFICATION

LOS PADRES NATIONAL FOREST

BAWMILL MOUNTAIN, CALIF.
N3445—W11907.5/7.5
190-3C
SHEET 65

## 24 - LOS ROBLES - TRIGO FAMILIES - ORTHENTS ASSOCIATION - 30 to 60 percent slopes

Elevation: 2500 to 6200 feet  Annual Precipitation: 8 to 14 inches

| Soil Map Unit Components | Los Robles | Trigo | Orthents |
|---|---|---|---|
| Approximate Proportion | 30 percent | 25 percent | 25 percent |
| Landscape Position | Mountainsides | Mountainsides, north and west aspects | Mountainsides, south & east aspects |
| Slope | 30 to 60 percent | 30 to 60 percent | 30 to 60 percent |
| Vegetation Series | Annual bromegrass or scrub oak | Annual bromegrass or lupine | Annual bromegrass or California buckwheat |
| **Soil Profile Description** | | | |
| Surface Layer | 0 to 4 inches; light yellowish brown sandy loam; moderate subangular blocky structure; soft; 10 percent pebbles; pH 8.0 | 0 to 10 inches; light yellowish brown gravelly sandy loam; weak subangular blocky structure; soft; 20 percent pebbles; pH 8.0 | 0 to 4 inches; light yellowish brown sandy loam; weak subangular blocky structure; soft; 10 percent pebbles; pH 8.0 |
| Subsoil | 4 to 21 inches; light yellowish brown loam; strong subangular blocky structure; slightly hard; pH 8.0 | 10 to 17 inches; very pale brown gravelly sandy loam; single grain; soft; 15 percent pebbles and 2 percent pebbles and 2 percent cobbles; pH 8.0 | 4 to 12 inches; very pale brown sandy loam; weak subangular blocky structure; soft; 25 percent pebbles; pH 8.0 |
| Substratum | 21 inches; weathered conglomerate | 17 inches; soft conglomerate and sandstone | 12 inches; soft weathered sandstone and conglomerate |
| **Soil Properties and Management Interpretations** | | | |
| Effective Rooting Depth | moderately deep | shallow | very shallow |
| Available Water Capacity | moderate | very low to low | very low to low |
| Water Retention Class | 1 | 2 | 2 |
| Hydrologic Soil Group | C | D | D |
| Permeability | moderately rapid | rapid | rapid |
| Max Erosion Hazard | high | high | high |
| Erosion Factor (K) | 0.28 | 0.37 | 0.37 |
| Drainage Class | well drained | excessive drained | well drained |
| Soil Manageability Class | 3E | 3Edx | 3Edx |
| Group | III | III | III |
| Type Conversion Class | 2 | 3 | 3 |
| Total Production (lb/acre) | 2400 | 1000 | 1400 |
| Forest Survey Site Class | None | None | None |

Included Areas & Remarks

Included in this unit are areas of Fluvents family (38), Modesto family (46), and Ramona family (45). Included areas make up about 20 percent of map unit area. This map unit is mostly stable with a few dry ravel slides. Some areas have up to 10 percent surface rock fragments. The bedrock is fractured at 4 to 15 inch intervals with few fine and many medium roots within the cracks.

## 35 - MORICAL - SUPAN - GREEN BLUFF FAMILIES ASSOCIATION - 10 to 60 percent slopes

Elevation: 4700 to 8100 feet  Annual Precipitation: 14 to 20 inches

| Soil Map Unit Components | Morical | Supan | Green Bluff |
|---|---|---|---|
| Approximate Proportion | 40 percent | 20 percent | 20 percent |
| Landscape Position | Mountain slopes, terraces, or alluvial fans | Mountain slopes, terraces, or alluvial fans | Mountain slopes, or hillslopes |
| Slope | 10 to 60 percent | 10 to 60 percent | 10 to 60 percent |
| Vegetation Series | Pinyon pine, scrub oak, sagebrush, or Jeffrey pine | Sagebrush or annual bromegrass | Sagebrush or pinyon pine |

### Soil Profile Description

| | | | |
|---|---|---|---|
| Surface Layer | 0 to 2 inches; dark brown loam; weak granular structure; slightly hard; 3 percent pebbles; pH 7.0 | 0 to 7 inches; dark grayish brown gravelly loam; weak subangular blocky structure; slightly hard; 20 percent pebbles and 5 percent cobbles; pH 7.2 | 0 to 6 inches; very dark grayish brown sandy loam; weak subangular blocky structure; slightly hard; 5 percent pebbles; pH 7.4 |
| Subsoil | 2 to 28 inches; yellowish brown sandy clay loam; moderate subangular blocky structure; slightly hard; 10 percent pebbles; pH 7.0 | 7 to 32 inches; dark grayish brown gravelly clay loam; moderate subangular blocky structure; slightly hard; 20 percent pebbles and 5 percent cobbles; pH 7.1 | 6 to 18 inches; yellowish brown sandy loam; moderate subangular blocky structure; slightly hard; 5 percent gravels; pH 8.0 |
| Substratum | 28 to 60 inches; strong brown gravelly sandy loam; massive; slightly hard; 12 percent pebbles and 5 percent cobbles; pH 6.0 | 32 to 60 inches; dark brown gravelly loam; moderate subangular blocky structure; hard; 20 percent gravels and 10 percent cobbles; pH 7.2 | 18 to 28 inches; pale brown sandy loam; massive; slightly hard; 5 percent pebbles and 2 percent cobbles; pH 8.0<br>28 inches; weathered sandstone |

### Soil Properties and Management Interpretations

| | | | |
|---|---|---|---|
| Effective Rooting Depth | very deep | very deep | moderately deep |
| Available Water Capacity | moderate to high | moderate | moderate |
| Water Retention Class | 1 | 1 | 1 |
| Hydrologic Soil Group | B | B | B |
| Permeability | moderate | moderate | rapid |
| Max Erosion Hazard | high | high | high |
| Erosion Factor (K) | 0.32 | 0.28 | 0.24 |
| Drainage Class | well drained | well drained | well drained |
| Soil Manageability Class | 3E | 3E | 3E |
| Group | III | III | III |
| Type Conversion Class | 2 | 2 | 2 |
| Total Production | 2200 lb/acre | 2600 lb/acre | 1500 lb/acre |
| Forest Survey Site Class | 6 | 7 | 7 |

Included Areas & Remarks

Included in this unit are areas of Los Gatos family (20), Millerton family (25), soils similar to Morical family (35), and soils similar to Supan family (35). Included areas make up about 20 percent of map unit area. This map unit is mostly stable with a few dry ravel slides and rock slides. Some areas have up to 10 percent surface rock fragments. The bedrock is fractured at 1 to 4 inch intervals with no roots within the cracks.

## 39 - ORTHENTS - FLUVENTS COMPLEX - 0 to 15 percent slopes

Elevation: 3500 to 4800 feet  Annual Precipitation: 12 to 16 inches

| Soil Map Unit Components | Orthents | Fluvents |
|---|---|---|
| Approximate Proportion | 60 percent | 30 percent |
| Landscape Position | stream terraces | stream terraces |
| Slope | 0 to 15 percent | 0 to 15 percent |
| Vegetation Series | Annual bromegrass or pinyon pine | Sagebrush or annual bromegrass |

### Soil Profile Description

| | | |
|---|---|---|
| Surface Layer | 0 to 5 inches; light yellowish brown coarse sandy loam; weak platy structure; soft; 8 percent pebbles; pH 8.0 | 0 to 14 inches; pale brown sandy loam; weak granular structure; soft; 2 percent pebbles; pH 8.0 |
| Subsoil | 5 to 60 inches; very pale brown sandy loam; massive; slightly hard; 4 percent pebbles; pH 8.0 | 14 to 40 inches; pale brown sandy loam; massive; slightly hard; 2 percent pebbles; pH 8.0 |
| Substratum | 5 to 60 inches; very pale brown sandy loam; massive; slightly hard; 4 percent pebbles; pH 8.0 | 14 to 60 inches; pale brown sandy loam; massive; slightly hard; 2 percent pebbles; pH 8.0 |

### Soil Properties and Management Interpretations

| | | |
|---|---|---|
| Effective Rooting Depth | very deep | very deep |
| Available Water Capacity | moderate | moderate |
| Water Retention Class | 2 | 2 |
| Hydrologic Soil Group | B | B |
| Permeability | rapid | rapid |
| Max Erosion Hazard | moderate | moderate |
| Erosion Factor (K) | 0.20 | 0.24 |
| Drainage Class | well drained | well drained |
| Soil Manageability Class | 2e | 2e |
| Group | II | II |
| Type Conversion Class | 2 | 2 |
| Total Production (lb/acre) | 1750 | 1800 |
| Forest Survey Site Class | 7 | 7 |

Included Areas & Remarks: Included in this unit are areas of Modesto family (46), and riverwash (50). Included areas make up about 10 percent of map unit area. This map unit is subject to gully erosion. Some areas have up to 50 percent surface rock fragments. There is no bedrock within 60 inches. This map unit is subject to flash floods from concentrated runoff on adjacent steeper mountain slopes.

## FLUVENTS

Fluvents soils consist of deep or very deep soils formed in alluvium. They are on recent stream terraces and alluvial bottomlands at elevations of 2,700 to 4,800 feet. Slopes range from 0 to 15 percent. Annual precipitation is 8 to 17 inches.

**Range in characteristics:** Depth is 60 inches or more. The substratum is stratified and the organic matter decreases irregularly with depth.

The A horizon is light brownish gray, brown or yellow (2.5 YR 6/2; 10 YR 5/3, 7/6). It is loamy fine sand, sandy loam, or sandy clay loam. Rock fragments range from 2 to 15 percent. It is moderately alkaline to strongly alkaline.

The C horizon is pale brown or very pale brown (10YR 6/3, 8/3). It is gravelly sand, gravelly sandy loam, sandy loam, or sandy clay loam. Rock fragments range from 0 to 30 percent. It is moderately alkaline to strongly alkaline. Some pedons contain very thin horizons of silt or gravel.

**Vegetation:** Sagebrush, rabbitbrush, annual bromegrass, or California buckwheat.

## GREEN BLUFF FAMILY

Green Bluff family consist of moderately deep, well-drained soils formed in material weathered from sandstone or conglomerate. They are on mountain uplands and hillslopes, at elevations of 4,700 to 8,100 feet. Slopes range from 10 to 60 percent. Annual precipitation is 13 to 30 inches.

**Taxonomic class:** These soils are coarse-loamy , mixed, mesic Typic Xerochrepts.

**Typical pedon:** Typical pedon of Green Bluff family is in a unit of Hohmann-Green Bluff-Konocti families association, 30 to 60 percent slopes under pinyon pine at an elevation of 5,250 feet.

A1–0 to 2 inches; dark grayish brown (2.5Y 4/2) sandy loam, very dark grayish brown (2.5Y 3/2) moist; weak, fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common fine tubular pores; 5 percent pebbles; mildly alkaline (pH 7.4); clear smooth boundary.

A3–2 to 6 inches; dark brown (10YR 4/3) sandy loam, very dark grayish brown (10YR 3/2) moist; moderate, medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few medium roots; common medium tubular pores; 8 percent pebbles; strongly effervescent; moderately alkaline (pH 7.9); clear smooth boundary.

B2–6 to 18 inches; light yellowish brown (10YR 6/4) sandy loam, olive brown (2.5 Y 4/4) moist; moderate, medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few fine, common, medium and coarse roots; few fine tubular pores; few thin clay films between mineral grains; strongly effervescent; 5 percent pebbles; moderately alkaline (pH 8.0); gradual smooth boundary.

C1–18 to 28 inches; pale brown (10YR 6/3) gravelly sandy loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, nonsticky and non-plastic; few medium roots in fractures; few fine tubular pores; 25 percent pebbles, 2 percent cobbles; slightly effervescent; moderately alkaline (pH 8.0).

Cr–28 to 32 inches; weathered sandstone.

**Type location:** Approximately 0.4 miles north (left cut bank on the private dirt road) from the intersection of Lockwood - Ozena Road and Thorn Meadows Road in the NW 1/4, NW 1/4, Section 9, T. 7 N, R. 2l W., S.B.B.M.

**Range in characteristics:** The soil depth to a paralithic contact is 20 to 40 inches. The soil is usually dry from June to October.

The A horizon is light brownish gray, dark grayish brown, or yellowish brown (2.5Y 6/2, 4/2; 10YR 5/4). It is sandy loam, gravelly sandy loam, or loam. Rock fragments range from 0 to 25 percent. It is slightly acid to moderately alkaline.

The B2 horizon is grayish brown, brown, or light yellowish brown (2.5Y 5/2; 10 YR 6/4). It is cobbly sandy loam or sandy loam. Rock fragments range from 5 to 35 percent. It is neutral to moderately alkaline.

The C horizon is grayish brown or pale brown (2.5Y 5/2; 10YR 6/3). It is cobbly coarse loamy sand or gravelly sandy loam. Rock fragments range from 5 to 55 percent. It is neutral to mildly alkaline.

**Vegetation:** Annual bromegrass, wild oats, sagebrush, western juniper or pinyon pine.

## LOS ROBLES FAMILY

Los Robles family consist of moderately deep, somewhat poorly or well drained soils formed in material weathered from sandstone, shale, conglomerate, or metavolcanic rocks. They are on mountain slopes and older stream terraces at elevations of 2,400 to 6,200 feet. Slopes range from 10 to 75 percent. Annual precipitation is 8 to 28 inches.

**Taxonomic Class:** These soils are fine-loamy, mixed, thermic Typic Xerochrepts.

**Typical pedon:** Typical pedon of Los Robles family is in a unit of Agua Dulce-Los Robles-Modeska families association, 10 to 60 percent slopes under California buckwheat and bromegrass at an elevation of 3,250 feet.

A1–0 to 7 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 5/3) moist; weak, fine granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine roots; common fine interstitial pores; strongly effervescent; 10 percent pebbles; moderately alkaline (pH 8.0); abrupt wavy boundary.

B1–7 to 14 inches; yellowish brown (10YR 5/4) sandy loam; dark brown (10YR 4/3) moist; weak, medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common fine roots; common fine interstitial pores; strongly effervescent; 8 percent pebbles; moderately alkaline (pH 8.0); clear smooth boundary.

B2–14 to 27 inches; light yellowish brown (10YR 6/4) sandy clay loam, dark brown (10YR 4/3) moist; moderate, medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; few fine interstitial pores; strongly effervescent; 10 percent pebbles moderately alkaline (pH 8.0); clear smooth boundary.

B3–27 to 35 inches; yellowish brown (10YR 5/4) loam, dark brown (10YR 4/3) moist; moderate, medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common fine tubular pores; violently effervescent, common fine irregularly shaped segregated lime in soft masses; moderately alkaline (pH 8.0); clear smooth boundary.

Cr–35 to 48 inches; soft weathered sandstone.

**Type location:** approximately 4 miles east of Ballinger Canyon campground, past the second large creek crossing, (due south of the crossing) near the base of the hill in the NE 1/4, NE 1/4, Sec. 9, T. 9 N., R. 24 W., S.B.B.M., Ballinger Canyon Quadrangle.

**Range in characteristics:** Depth to a paralithic or lithic contact is 21 to 40 inches. The soil is usually dry from June to October.

The A horizon is light olive brown, brown, pale brown, or reddish yellow (2.5Y 5/4; 10YR 6/3, 7/3; 7.5YR 6/6). It is sandy loam, very gravelly sandy clay loam, or loam. Rock fragments range from 0 to 50 percent. It is medium acid to moderately alkaline.

The B2 horizon is pale brown or light yellowish brown (10YR 6/3, 6/4). It is gravelly sandy loam, sandy clay loam or gravelly clay loam. Rock fragments range from 0 to 30 percent. It is neutral to strongly alkaline. Some pedons contain a C horizon that may be calcareous.

**Vegetation:** Chamise, western juniper, California buckwheat, scrub oak, or annual bromegrass.

## MORICAL FAMILY

Morical family consist of moderately deep to deep, well drained soils formed in material weathered from schist, gneiss, granitic, sandstone or shale rocks. They are on mountain slopes and older stream terraces at elevations of 1,750 to 8,100 feet. Slopes range from 10 to 70 percent. Annual precipitation is 14 to 34 inches.

**Taxonomic Class:** These soils are fine-loamy, mixed, mesic Mollic Haploxeralfs.

**Typical pedon:** Typical pedon for Morical family is in a unit of Morical-Supan-Greenbluff families association, 10 to 60 percent slopes under scrub oak, manzanita, pinyon pine, and canyon live oak at an elevation of 6,500 feet.

01–2 to 0 inches; undecomposed leaves and twigs.

A1–0 to 6 inches; brown (10YR 5/3) sandy clay loam, black (10YR 2/1) moist; moderate, fine, subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; many very fine and few fine interstitial pores; 10 percent pebbles; slightly acid (pH 6.5); clear wavy boundary.

B21t–6 to 15 inches; yellowish brown (10YR 5/4) gravelly sandy clay loam, dark brown (10YR 4/3) moist; moderate, medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few very fine, many fine and few medium roots; few fine and medium interstitial pores; few moderately thick clay films on ped faces and in pores; 20 percent pebbles; neutral (pH 7.0); clear wavy boundary.

B22t–15 to 45 inches; strong brown (7.5YR 5/6) gravelly sandy clay loam, strong brown (7.5YR 4/6) moist; moderate, very fine subangular blocky structure; slightly hard, friable, sticky and slightly plastic; common fine and medium roots; few fine interstitial pores; common moderately thick clay films on ped faces and in pores; 30 percent pebbles, 2 percent cobbles; neutral (pH 7.0); clear wavy boundary.

C1–45 to 60 inches; strong brown (7.5YR 5/6) gravelly sandy loam, dark brown (10YR 4/3) moist; weak, very fine subangular blocky structure; soft, friable, nonsticky and nonplastic; common medium roots; few fine interstitial pores; 20 percent pebbles, 10 percent cobbles, 5 percent stones; neutral (pH 7.0).

**Type location:** Approximately 1.5 miles south up the Mt. Abel Road from the county highway maintenance station, road cut bank, in the NW 1/4, NW 1/4, Sec. 22, T. 9 N., R. 22 W., S.B.B.M., Sawmill Mountain Quadrangle.

Range in characteristics: Depth to a lithic contact is 21 tp 60 inches. The soil is usually dry from June to October.

The A horizon is grayish brown or brown (10YR 5/2; 7.5YR 5/4). It is gravelly sandy loam, loam, or sandy clay loam. Rock fragments range from 0 to 25 percent. It is slightly acid to mildly alkaline.

The B2t is dark grayish brown, yellowish brown or strong brown (10YR 4/2; 5/4; 7.5YR 5/6). It is sandy loam, sandy clay loam or gravelly sandy clay loam. Rock fragments range from 0 to 30 percent. It is strongly acid to mildly alkaline.

The C horizon is yellowish brown or strong brown (10YR 5/4; 7.5YR 5/6). It is sandy loam or gravelly sandy loam. Rock fragments range from 0 to 30 percent. It is medium acid to neutral.

**Vegetation:** Pinyon pine, scrub oak, sagebrush, Jeffrey pine, canyon live oak, manzanita, white fir, or scrub oak.

## ORTHENTS

Orthents soils consist of very shallow to very deep, well drained soils formed in mixed alluvium or material weathered from sandstone. They are on valley floors, recent stream terraces, and mountain slopes at elevations of 2,500 to 6,200 feet. Slopes range from 0 to 60 percent. Annual precipitation is 8 to 17 inches.

**Range in characteristics:** Depth to a paralithic or lithic contact is 12 to 60 or more inches.

The A horizon is dark yellowish brown, very pale brown or strong brown (10YR 4/4, 7/4; 7.5YR 5/8). It is cobbly sandy loam or coarse sandy loam. Rock fragments range from 0 to 40 percent. It is mildly to moderately alkaline.

The C horizon is brown, very pale brown or reddish yellow (10YR 5/3, 7/4; 7.5YR 7/6). It is gravelly sand, sandy loam or gravelly sandy loam. Rock fragments range from 5 to 50 percent. It is mildly alkaline to strongly alkaline.

**Vegetation:** Annual bromegrass, pinyon pine, juniper, coast live oak, California buckwheat, sagebrush, rabbit brush, sycamores, or willows.

## SUPAN FAMILY

Supan family consist of moderately deep to very deep, well drained soils formed in mixed alluvium or material weathered from gneiss, schist, granitic or sandstone rocks. They are on mountain slopes and valley floors at elevations of 3,100 to 8,100 feet. Slopes range from 0 to 60 percent. Annual precipitation is 14 to 25 inches.

**Taxonomic Class:** These soils are fine-loamy, mixed, mesic Pachic Argixerolls.

**Typical Pedon:** Typical pedon of Supan families association is in a unit of Kilburn-Wrentham-Supan families association, 10 to 30 percent slopes under Jeffery pine and pinyon pine at an elevation of 7,300 feet.

01–2 inches to 0; undecomposed pine needles and twigs.

A1–0 to 2 inches; dark grayish brown (10YR 4/2) sandy loam, very dark brown (10YR 2/2) moist; weak, medium subangular blocky structure; soft, friable, nonsticky and nonplastic; common very fine and fine roots; common fine interstitial pores; 5 percent pebbles; strongly acid (pH 5.5); abrupt smooth boundary.

B21t–2 to 12 inches; dark grayish brown (10YR 4/2) sandy clay loam, very dark brown (10YR 2/2) moist; moderate, medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium and few coarse roots; many very fine and common fine interstitial pores; few thin clay films in pores; 10 percent pebbles; neutral (pH 7.0); clear smooth boundary.

B22t–12 to 30 inches; brown (10YR 5/3) moist; gravelly sandy clay loam, dark brown (10YR 3/3) moist; weak, coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few medium roots; many very fine, common fine and medium interstitial pores; few moderately thick clay films in pores; 20 percent pebbles; medium acid (pH 6.0); abrupt irregular boundary.

R–30 to 33 inches; hard granitic rock.

**Type location:** 1.7 miles west of the dead end sign on the road to the West Frazier Mt. pine plantation. The profile is 50 feet northwest of the road and 75 feet west of the pine plantation boundary's west end in NW 1/4, NW 1/4, Sec. 27, T. 8 N., R. 20 W., S.B.B.M., Frazier Mountain Quadrangle.

**Range in characteristics:** Depth to a paralithic or lithic contact is 20 to 60 or more inches. The soil is dry from June to October.

The A horizon is dark gray, dark grayish brown, or brown (10YR 4/1, 4/2, 5/3). It is sandy loam, gravelly sandy loam, loam or sandy clay loam. Rock fragments range from 0 to 30 percent. It is strongly acid to moderately alkaline.

The B2t is very dark grayish brown, dark grayish brown, or yellowish brown (10YR 3/2, 4/2, 5/4). It is sandy clay loam, loam, or gravelly clay loam. Rock fragments range from 0 to 30 percent. It is medium acid to moderately alkaline. A few pedons contain a C horizon.

**Vegetation:** Jeffrey pine, scrub oak, pinyon pine, sagebrush, or annual bromegrass.

## TRIGO FAMILY

Trigo Family consist of shallow, well or somewhat excessively drained soils formed in material weathered from granitic or sedimentary rocks. They are on mountain slopes at elevations of 1,400 to 6,200 feet. Slopes range from 15 to 90 percent. Annual precipitation is 8 to 26 inches.

**Taxonomic Class:** These soils are loamy, mixed, nonacid, thermic, shallow Typic Xerorthents.

**Typical Pedon:** Typical pedon of Trigo family is in a unit of Trigo-Modesto- families-Badlands association, 45 to 90 percent slopes under annual bromegrass, wild oats, California buckwheat, manzanita, and scrub oak at an elevation of 4,700 feet.

A11–0 to 1 inches; pink (7.5YR 7/4) sandy loam, dark brown (7.5YR 4/4) moist; strong, medium platy structure parting to moderate fine subangular blocky structure; soft, friable, nonsticky and nonplastic; common very fine and few fine roots; fine interstitial pores, 5 percent pebbles; mildly alkaline (pH 7.5); abrupt smooth boundary.

A12–1 to 5 inches: light brown (7.5YR 6/4) sandy loam, dark brown (7.5YR 4/2) moist; weak, fine subangular blocky structure; soft, friable, nonsticky and nonplastic; common very fine and fine roots; common very fine interstitial pores; 10 percent pebbles; mildly alkaline (pH 7.5); clear smooth boundary.

C1–5 to 12 inches; reddish yellow (7.5YR 7/6) gravelly sandy loam, brown (7.5YR 5/4) moist; weak, very fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; few fine and coarse roots; few fine interstitial pores; 30 percent pebbles; mildly alkaline (pH 7.5); clear smooth boundary.

Cr–12 to 16 inches; softly weathered conglomerate.

**Type location:** North side of a steep ridge that is parallel to Quatal Canyon Road's north side in the NE 1/4, NW 1/4, Sec. 19, T. 9 N., R. 22 W., S.B.B.M., Apache Canyon Quadrangle.

**Range in characteristics:** Depth to a paralithic contact is less than 20 inches. The soil is usually dry from June to October.

The A horizon is brown, or light yellowish brown or pink (10YR 5/3, 6/4; 7.5 YR 7/4). It is gravelly coarse sandy loam or sandy loam. Rock fragments range from 0 to 30 percent. It is medium acid to moderately alkaline.

The C horizon is yellowish brown or reddish yellow (10YR 5/6; 7.5 YR 7/6). It is gravelly coarse sandy loam, gravelly sandy loam or sandy loam. Rock fragments range from 0 to 30 percent. It is medium acid to moderately alkaline. Some pedons lack a C horizon.

**Vegetation:** Annual bromegrass, lupine, manzanita, scrub oak, California buckwheat, needle grass, chamise, red shank, pinyon pine, or western juniper.